

PUBLICATIONS AND PRESENTATIONS 2002-2010 (3/9/2010)

Nuclear Medicine Program Staff, Isotope Development Group
 Nuclear Science and Technology Division
 Oak Ridge National Laboratory (ORNL)

Peer-Reviewed Journal Articles

Woodward, J., Kennel, S. J., Stuckey, A., Osborne, D., Wall, J., Rondinone, A., Standaert, R. and Mirzadeh, S. "LaPO₄ Nanoparticles Doped with Actinium-225 that Partially Sequester Daughter Radionuclides," *Bioconj. Chem.* (*submitted, 2010*).

Bestaoui-Spurr, N., Cisar, A., Adams, T., Cosgrove, J. M. and Knapp, F. F., Jr. "Crystalline Inorganic Ion Exchanger for Rhenium-188 Generator," *for, Appl. Radiat. Isot.*, in preparation (2010).

Ponsard, B., Srivastava, S. C., Mausner, L. F., Knapp, F. F., Garland, M. A. and Mirzadeh, S. "Production of Sn-117m in the BR2 High-Flux Reactor," *Appl. Rad. Isot.*, 67, 1158-1161 (2009).

Jeong, J. M. and Knapp, F. F., Jr. "Use of the Oak Ridge National Laboratory Tungsten-188/Rhenium-188 Generator for Preparation of the Rhenium-188 HDD/Lipiodol Complex for Trans-Arterial Liver Cancer Therapy," *Semin. Nucl. Med.*, 38(2), S19-29 (2008).

Kennel, S. J., Woodward, J. D., Rondindone, A. J., Walls, J., Huang, Y. and Mirzadeh, S. "The Fate of MAbs-Targeted Cd(^{125m}Te/ZnS) Nanoparticles *In Vivo*," *Nucl. Med. Biol.*, 35, 501-514 (2008).

Diener, M. D., Alford, J. M., Kennel, S. J. and Mirzadeh, S. "²¹²Pb@C₆₀ and its Water-Soluble Derivatives: Synthesis, Stability and Suitability for Radioimmunotherapy," *J. Amer. Chem. Soc.*, 129, 5131-5138 (2007).

Jeong, J.-M., Choe, Y. S. and Knapp, F. F., Jr. "The WFNMB Survey on the Introduction of New Radiopharmaceuticals for Clinical Research: Snapshot of the International Perspective," *World J. Nucl. Med.*, 6, 52-56 (2007).

Knapp, F. F., Jr., Mirzadeh, S., Anderson, B. M., Bornhop, D. J. and Osso, J. "Auger-Emitters for Cancer Therapy - An Important Opportunity for the Development of New Targeted Radiopharmaceuticals," *World J. Nucl. Med.*, 6, S55-S57 (2007).

McKillop, J. H., Martin-Comin, J., Knapp, F. F., Jr. and Britten, A. "Highlights of the 2006 European Association of Nuclear Medicine Congress, Athens, Greece," *Eur. J. Nucl. Med.*, 34, 274-293 (2007).

McKillop, J. H., Martin-Comin, J., Knapp, F. F., Jr. and Britten, A. "Nuclear Medicine is Flourishing - Highlights of the European Association of Nuclear Medicine Congress 2006," *Int. Hosp. Equip.*, 1, 18-19 (2007).

Padhy, A. J., Bernal, P., Buscombe, R. J., Chau, T., Chen, S. L., Divgi, C., Jeong, J. M., Knapp, F. F., Jr., Kumar, A., Ogbac, R., Pusuwan, P., Raoul, J.-L., Saw, M. M., Sereegotov, E., Stare, J., Sundram, F. X., Turner, J. H., Vidmar, G. and Zanzonica, P. "Rhenium-188 Lipiodol Therapy of

Hepatocellular Carcinoma: Results of a Multicentre-Multinational Study," *World J. Nucl. Med.*, 6, S55-S57 (2007).

Schaiff, W. T., Knapp, F. F., Jr., Barak, Y., Biron-Shental, T., D., Nelson, D. M. and Sadovsky, Y. "Ligand-Activated PPAR γ Alters Placental Morphology and Placental Fatty Acid Uptake in Mice," *Endocrinology*, 148, 3625-3634 (2007).

Woodward, J. D., Kennel, S. J., Mirzadeh, S., Dai, S., Wall, J. S., Richey, T., Avenell, J. and Rondinone, A. J. "In Vivo SPECT/CT Imaging and Biodistribution Using Radioactive Cd^{125m}Te/ZnS Nanoparticles," *Nanotech.*, 18, # 175103 (5 pages) (2007).

Reynen, K., Kropp, J., Koeckeritz, U., Wunderlich, G., Knapp, F. F., Schmeisser, A. and Strasser, R. H. "Intracoronary Radiotherapy with a Rhenium-188 Liquid-Filled Angioplasty Balloon System in In-Stent Restenosis: A Single Center, Prospective, Randomized, Placebo-Controlled, Double-Blind Evaluation," *Coronary Artery Disease*, 17, 371-377 (2006).

Boll, R. A., Malkemus, D. and Mirzadeh, S. "Production of Actinium-225 for Alpha Particle-Mediated Radioimmunotherapy," *Appl. Radiat. Isot.*, 62, 667-679 (2005).

Kennel, S. J., Lankford, P., Garland, M., Sundberg, J. P. and Mirzadeh, S. "Biodistribution of Ra-225 Citrate in Mice: Retention of Daughter Radioisotopes in Bone," *Nucl. Med. Biol.*, 32, 859-867 (2005).

Knapp, F. F., Jr., Mirzadeh, S., Beets, A. L. and Du, M. "Production of Therapeutic Radioisotopes in the ORNL High Flux Isotope Reactor (HFIR) for Applications in Nuclear Medicine, Oncology and Interventional Cardiology," *J. Radioanalyt. Nucl. Chem.*, 263 (2), 503-509 (2005).

Knapp, F. F., Jr., Turner, J. H., Jeong, J.-M. and Padhy, A. K. "Issues Associated with the Use of the Tungsten-188/Rhenium-188 Generator and Concentration System and Preparation of Re-188-HDD," *World J. Nucl. Med.*, 3, 137-143 (2004).

Reynen, K., Kockeritz, U., Kropp, J., Wunderlich, G., Knapp, F. F., Schmeisser, A. and Strasse, R. H. "Intracoronary Radiotherapy with a Rhenium-188 Liquid-Filled PTCA Balloon System in In-Stent Restenosis: Acute and Long-Term Angiographic Results, As Well As 1 Year Clinical Follow-up," *Internat. J. Card.*, 95, 29-34 (2004).

Garland, M. A., Mirzadeh, S., Alexander, C. W., Hirtz, G. J., Hobbs, R. W. and Knapp, F. F., Jr. "Flux Characterization of the Peripheral Target Positions in the High Flux Isotope Reactor," *Appl. Radiat. Isot.*, 59, 63-72 (2003).

Knapp, F. F., Jr., Mirzadeh, S., Beets, A. L. and Du, M. "Therapeutic Radioisotope Production in the High Flux Isotope Reactor (HFIR)," *J. Label Cmpds. Radiopharm.*, 46, S320 (2003).

Knapp, F. F., Jr., Mirzadeh, S., Beets, A. L. and Garland, M. "Production of Medical Radioisotopes in the ORNL High Flux Isotope Reactor," *Transactions, American Nuclear Society*, 89, 765-766 (2003).

Knapp, F. F., Jr. and Kropp, J. "The 11th Mediterranean Meeting on Nuclear Medicine and Radiopharmaceuticals," *Eur. J. Nucl. Med.*, 30, 1701-1702 (2003).

Haverlock, T. J., Mirzadeh, S. and Moyer, B. A. "Selectivity of Calix[4]arene-bis(benzocrown-6) in the Complexation and Transport of Francium Ion," *J. Amer. Chem. Soc.*, 125, 1126-1127 (2003).

Liepe, K., Hliscs, R., Kropp, J., Ningl, T. G., Runge, 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.*, 44, 953-960 (2003).

Liepe, K., Kropp, J., Hliscs, R., Runge, R., Knapp, F. F., Jr. and Franke, W.-G. "Radiation Dosimetry of Rhenium-188-HEDP in Human Prostate Cancer Skeletal Metastases," *J. Nucl. Med.*, 44, 953-960 (2003).

Palmedo, H., Manka-Waluch, A., Albers, P., Schmidt, W., Guhlke, S., Reinhardt, M., Ezziddin, S., Joe, A., Roedel, R., Fimmers, H., Knapp, F. F., Jr. and Biersack, H.-J. "Repeated Bone Targeted Therapy for Hormone-Refractory Prostate Carcinoma: Randomized Phase II Trial with the New, High-Energy Radiopharmaceutical Rhenium-188-HEDP," *J. Clin. Oncol.*, 21, 2869-2875 (2003).

Ponsard, B., Hiltunen, J., Vera-Ruiz, H., Beets, A. L., Mirzadeh, S. and Knapp, F. F., Jr. "The Tungsten-188/Rhenium-188 Generator: Effective Coordination of Tungsten-188 Production Between the HFIR and BR2 Reactors," *J. Radioanalyt. Nucl. Chem.*, 257, 169-174 (2003).

Sloof, G. W., Knapp, F. F., Jr., van Lingen, A., Eersels, J., Poldermans, D. and Bax, J. J. "Nuclear Imaging Is More Sensitive For the Detection of Viable Myocardium Than Dobutamine Echocardiography," *Nuclear Med. Commun.*, 24, 357-381 (2003).

Verberne, H. J., Sloof, G. W., Beets, A. L., Murphy, A. M., van Eck-Smit, N. L. F. and Knapp, F. F., Jr. "Free Fatty Acid and Glucose Uptake in a Transgenic Mouse Model of Stunned Myocardium," *Eur. J. Nucl. Med.*, 30, 431-439 (2003).

Buhman, K. K., Smith, S. J., Stone, S., Repa, J., Wong, J. S., Knapp, F. F., Jr., Burri, B., Hamilton, R. L., Abumrad, N. A. and Farese, R. V., Jr. "DAGAT1 Is Not Essential for Intestinal Triacylglycerol Absorption or Chylomicron Synthesis," *J. Biol. Chem.*, 277, 25474-25479 (2002).

Febbraio, M., Guy, E., Coburn, C., Knapp, F. F., Jr., Beets, A. L., Abumrad, N. A. and Silverstein, R. L. "The Impact of Overexpression and Deficiency of Fatty Acid Translocase (FAT)/CD36," *Mol. Cell. Biochem.*, 239, 193-197 (2002).

Hambye, A.-S., Dobbelier, A., Vervaet, A. and Knapp, F. F., Jr. "Image Quality of Rhenium-188 and Technetium-99m - Comparative Planar and SPECT Evaluation in a Phantom Study - Implications for Dosimetric Calculation," *World J. Nucl. Med.*, 1, 12-20 (2002).

Kennel, S. J., Lankford, T., Daven, S., Foote, L., Taniguchi, K., Ohizumi, Y., Nakagawa, S., Mayumi, T. and Mirzadeh, S. "Therapy of Rat Tracheal Carcinoma IC-12 in SCID Mice. Vascular Targeting with ²¹³Bi-MAb TES-23," *Eur. J. Can.*, 1278-1287 (2002).

Kennel, S. J., Brechbiel, M. W., Schlom, J. and Mirzadeh, S. "Actinium-225 Conjugates of Mab CC49 and Humanized Delta CH2CC49," *Can. Biother. and Radiopharm.*, 17, 219-231 (2002).

Kennel, S. J., Mirzadeh, S., Eckelman, W. C., Waldmann, T. A., Garmestani, K., Yordanov, A. T.,

Stabin, M. G. and Brechbiel, M. W. "Vascular-Targeted Radioimmunotherapy with the Alpha-Particle Emitter, Astatine-211," *Radiat. Res.*, 157, 633-641 (2002).

Mirzadeh, S., Lambrecht, F. Y. and Lambrecht, R. M. "Decay of Tungsten-189," *Appl. Radiat. Isot.*, 57, 637-646 (2002).

Sundram, F. X., Yu, S., Somanesan, S., Jeong, J. M., Bernal, P., Osorio, M., Esguerra, R., Chau, T. C. M., Long, H. D., Hoa, N. V., Huy, N. D. S., Onkhuudai, P., Lamjav, T., Zanzonica, P., Divgi, C., Padhy, A. K., Martindale, A., Saw, M. M., Rolland, Y. and Knapp, F. F., Jr. "Phase I Study of Transarterial Rhenium-188 HDD Lipiodol in Treatment of Inoperable Primary Hepatocellular Carcinoma - A Multicentre Evaluation," *World J. Nucl. Med.*, 1, 5-11 (2002).

Book Chapters and Meeting Proceedings and Special Publications Describing ORNL Technology

Knapp, F. F., Jr. and Pillai, M. R. A., "Strategies for Production and Purification of Lutetium-177," Chapter 4, *In, Lutetium-177 Radiopharmaceutical Therapy*, International Atomic Energy Agency (IAEA), Vienna, Austria, *in press* (2010).

Knapp, F. F., Jr., Kropp, J. and Liepe, K. "The Tungsten-188/Rhenium-188 Generator," Chapter 3, *In, Therapeutic Nuclear Medicine, Radiation Oncology/Medical Radiology Series*, Springer-Verlag; R. P. Baum, Editor, *in preparation*.

Knapp, F. F., Jr., Mirzadeh, S., Garland, M. and Kuznetsov, R. "Reactor Production and Processing of Tungsten-188," Chapter 5, *In, Parent Radionuclides for Generators: ⁶⁸Ge, ⁸²Sr, ⁹⁰Sr and ¹⁸⁸W*; Radioisotopes and Radiopharmaceutical TECDOC Series, *International Atomic Energy Agency (IAEA)*, Vienna, Austria, *in press* (2009).

Monroy-Guzman, F., Badillo Almaraz, V. E., Rivero Guitierrez, T., Galico Cohen, L., J. A., Cosgrove, J. M., Knapp, F. F., Jr., Rojas Nava, P. and Rosales, C. J. "Development of Inorganic Adsorbents as Matrices of Generators for Therapeutic Radionuclides," *Therapeutic Radionuclide Generators: ⁹⁰Sr/⁹⁰Y and ¹⁸⁸W/¹⁸⁸Re Generators*; pp. 161-172, *Technical Report Series No. 470, International Atomic Energy Agency (IAEA)*, Vienna, Austria (STI/DOC/010/470) (2009).

Osso, J. and Knapp, F. F., Jr., Invited Chapter, on "Radionuclide Generators," *In, Sampson's Textbook on Radiopharmacy*, 4th Edition, *in press* (2009).

Roesch, F. and Knapp, F. F., Jr. "Radionuclide Generators," *Invited Chapter, In*, 4th Edition, Handbook of Nuclear Chemistry, A. Vertes, N. S. Klencsar, Editors; Kluwer Academic Publishers, Amsterdam, *in press* (2009).

Bestaoui-Spurr, N., Cisar, A., Adams, T., Cosgrove, J. M. and Knapp, F. F., Jr. "Crystalline Inorganic Ion Exchanger for Rhenium-188 Generator," *Proceedings, Annual Meeting, American Nuclear Society*, Anaheim, CA, June 8-12, 2008; p. 865 (2008).

Boll, R., Garland M. and Mirzadeh, S. "Production of Thorium-229 in the ORNL High Flux Isotope Reactor," *Proceedings, Annual Meeting, American Nuclear Society*, Anaheim, CA, June 8-12, 2008; p. 814 (2008).

Knapp, F. F., Jr. "Comparative Evaluation of Therapeutic Radiopharmaceuticals, IAEA Technical Report Series No. 458 (ISBN 92-0-115106-3)," Book Review, *Appl. Radiat. Isot.*, 66, 2013 (2008).

Knapp, F. F., Jr. "The Important Role of Research Reactors for Production of Therapeutic Radioisotopes," *6th International Conference on Isotopes*, Seoul, Korea, May 13-16, 2008; Abstract # PL 1-1, p. 16.

Mirzadeh, S., Garland, M. and Kennel, S. J. "Retention of Radium-225 and Its Daughter Radioisotopes in Bone," *Proceedings, Annual Meeting, American Nuclear Society*, Anaheim, CA, June 8-12, 2008; p. 815 (2008).

Ponsard, B., Garland, M. A., Knapp, F. F. (Russ) Jr., S. Mirzadeh, S., Srivastava, S. C. and Mausner, L. F.. "Production of Sn-117m in the BR2 and HFIR High-Flux Reactors," *Proceedings, Annual Meeting, American Nuclear Society*, Anaheim, CA, June 8-12, 2008; p. 903 (2008).

Ponsard, B., Srivastava, S. C., Mausner, L. F., Knapp, F. F., Garland, M. A. and Mirzadeh, "Production of Sn-117m in the BR2 High-Flux Reactor," *6th International Conference on Isotopes*, Seoul, Korea, May 13-16, 2008; – Abstract # ST1-2-2, p. 95.

Knapp, F. F., Jr., Mirzadeh, S., Anderson, B. M., Bornhop, D. J. and Osso, J. "Auger-Emitters for Cancer Therapy – An Important Opportunity for the Development of new Targeted Radiopharmaceuticals," *2nd International Conference on Radiopharmaceutical Therapy (ICRT'07)*, Ulaanbaatar, Mongolia, September 3-7, 2007; *World J. Nucl. Med.*, 6, Suppl. 1, pp. S55-S57 (2007).

Knapp, F. F., Jr. "Installation, Use and Quality Control (QC) of the Alumina-Based Tungsten-188/Rhenium-188 Generators Provided by the Oak Ridge National Laboratory (ORNL)," *2nd International Conference on Radiopharmaceutical Therapy (ICRT'07)*, Ulaanbaatar, Mongolia, September 3-7, 2007; *World J. Nucl. Med.*, 6, Suppl. 1, pp. S65 (2007).

Knapp, F. F., Jr., Mirzaeh, S., and Garland, M. "The Continuing Important Role of High Flux Reactors for Production of Therapeutic Medical Radioisotopes," In, *Trends in Radiopharmaceuticals (ISTR-2005)*, Proceedings of the International Symposium, Vienna, Austria, November 14-18, 2005; Vol. I, pp. 301-321 (2007).

Knapp, F. F., Jr. "Clinical Use of the Tungsten-188/Rhenium-188 Generator," *IAEA Manual of the Clinical Introduction of Radionuclide Generators*, *in preparation*, 2007.

Monroy-Guzman, F., Badillo Almaraz, V. E., Flores de la Torre, J. A., Cosgrove, J. M. and Knapp, F. F., Jr. "Hydroxyapatite-Based Mo-99/Tc-99m and W-188/Re-188 Generator Systems," In, *Trends in Radiopharmaceuticals (ISTR-2005)*, Proceedings of the International Symposium, Vienna, Austria, November 14-18, 2005; Vol. I, pp. 333-348 (2007).

Padhy, A. K., and Members of the Global Rhenium-188 Lipiodol Liver Cancer Therapy Group, "Rhenium-188 Lipiodol Therapy of Hepatocellular Carcinoma: Results of a Multicentre-Multinational Study," *2nd International Conference on Radiopharmaceutical Therapy (ICRT'07)*, Ulaanbaatar, Mongolia, September 3-7, 2007; *World J. Nucl. Med.*, 6, Suppl. 1, pp. S65 (2007).

Almanza, C. L., Lovett, H. A., Schmitroth, F., Garland, M. A. and Mirzadeh, S. "Iso-Chain: A User-Friendly, Two-Group Nuclear Transmutation and Decay Code," *Proceedings, ANS Mid-Winter*

Meeting and Technology Expo, Albuquerque, New Mexico, November 12-16, 2006, pp. 441-442 (2006).

Boll, R. A. and Mirzadeh, S. "Actinium-225 for Alpha Particle Radioimmunotherapy," *Proceedings, ANS Mid-Winter Meeting and Technology Expo*, Albuquerque, New Mexico, November 12-16, 2006, pp. 451-452 (2006).

Knapp, F. F., Jr., Mirzadeh, S. and Garland, M. "The Availability of Lutetium-177 from Research Reactors," In, *Report of the 2nd Research Coordination Meeting on Development of Generator Technologies for Therapeutic Radionuclides*, Milan, Italy, March, April 4-7, 2006; pp. 100-109, (2006).

Monroy-Guzman, F., Badillo Almaraz, V. E., Rivero-Gutierrez, T., Cosgrove, J., Knapp, F. F., Jr., Rojas Nava, P. and Flores De La Torre, J. A. "Development of Inorganic Adsorbents as Matrices of Generators for Therapeutic Radionuclides," In, *Report of the 2nd Research Coordination Meeting on Development of Generator Technologies for Therapeutic Radionuclides*, Milan, Italy, March, April 4-7, 2006; pp 74-81 (2006).

Knapp, F. F., Jr., Cosgrove, J. M. and Porter, C. E. "The Tungsten-188/Rhenium-188 Generator – An Attractive Cost Effective Source of Rhenium-188 for Clinical Use," Technical Document (TECDOC) # 1065, *Research Coordination Meeting (RCM) on Radionuclide Generators*, International Atomic Energy Agency (IAEA), Vienna, Austria, October 4-8, 2004.

Bax, J. J., Knapp, F. F., Jr. and Visser, F. C. "Single-Photon Imaging of Myocardial Metabolism: Role of Iodine-123 Fatty Acids and Fluorine-18 Deoxyglucose," In, *Nuclear Medicine in Clinical Diagnosis and Treatment*, P. J. Ell and S. S. Gambhir, Editors; 3rd Edition, Churchill Livingston, Edinburgh, 2004 (ISBN 0 443 07312 0).

Iyer, S. R. and Knapp, F. F., Jr. *Editors, for*, "Manual for Reactor Production of Radioisotopes," International Atomic Energy Agency (IAEA), TECDOC-1340; Vienna, Austria, January 2003 (ISBN-92-0-101103-2).

Knapp, F. F., Jr. "Applications of Rhenium-188-Labeled Agents in Oncology," In, *Proceedings, the 11th Mediterranean Symposium on Nuclear Medicine and Radiopharmaceuticals*, May 28-30, Athens, Greece; Medittera Pub., Athens (ISBN 960-86437-2-4), pp. 147-156 (2003).

Knapp, F. F., Jr., Mirzadeh, S., Beets, A. L. and Du, M. "Production of Therapeutic Radioisotopes in the ORNL High Flux Isotope Reactor," In, *Proceedings, International Isotope Society Meeting*, Boston, MA, June 2-6, 2003.

Kropp, J., Pinkert, J., Wunderlich, G., and Knapp, F. F., Jr., "Radiochemistry, Evaluation and First Clinical Results in the Treatment of Oncologic Diseases with Rhenium-188-Labeled Microspheres," In, *Proceedings, the 11th Mediterranean Symposium on Nuclear Medicine and Radiopharmaceuticals*, May 28-30, Athens, Greece; Medittera Pub., Athens (ISBN 960-86437-2-4), pp. 157-166 (2003).

Mausner, L. F. and Mirzadeh, S. "Reactor Production of Radionuclides," In, *Handbook of Radiopharmaceuticals: Radiochemistry and Applications*, M. J. Welch and C. Redvanly, *Editors*; John Wiley and Sons, Ltd., pp. 87-118 (2003).

Mirzadeh, S., Mausner, L. F. and Garland, M. "Reactor-Produced Medical Radioisotopes," *In, Handbook of Nuclear Chemistry*, Volume 4, Chapter 3, pp. 1-46; A. Vertes, N. S. Klencsar, Editors; Kluwer Academic Publishers, Amsterdam (2003).

Liepe, K., Kropp, J., Hliscs, R., Runge, R., Knapp, F. F., Jr. and Kotzerke, J. "Rhenium-188 HEDP Dosimetry in Bone Pain Induced by Prostate Cancer," *In, Proceedings*, the 11th Mediterranean Symposium on Nuclear Medicine and Radiopharmaceuticals, May 28-30, Athens, Greece; Medittera Pub., Athens (ISBN 960-86437-2-4), pp. 69-82 (2003).

Ponsard, B., Mirzadeh, S. and Knapp, F. F., Jr. "Production of Tungsten-188 in the BR2 Reactor in Collaboration with ORNL," *In, Proceedings*, International Isotope Society Meeting, Boston, MA, June 2-6, 2003.

Roesch, F. and Knapp, F. F., Jr. "Radionuclide Generators," *In, Handbook of Nuclear Chemistry*, Volume 4, Chapter 3, pp. 81-118; A. Vertes, N. S. Klencsar, Editors; Kluwer Academic Publishers, Amsterdam (2003).

Binney, S. E., Krane, K. S., Garland, M. A., Pertmer, G. A. and Mirzadeh, S. "Measurement of Neutron Cross Sections for Medical Isotopes," *Trans. Amer. Nucl. Soc.*, 86, 167-168 (2002).

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, pp. 753-790 (2002).

Patents for Nuclear Medicine Program

Knapp, F. F., Jr., Mirzadeh, S. and Boll, R. "Chromatographic Extraction with Di(2-ethylhexyl)orthophosphoric Acid for Production and Purification of Promethium-147," U.S. Patent No. 7,435,399, Issued October 14, 2008.

Mirzadeh, S., Du, M., Beets, A. L. and Knapp, F. F., Jr. "High Specific Activity Platinum-195m," U. S. Patent No. 6,804,319, Issued October 12, 2004.

Beets, A. L., Du, M., Mirzadeh, S. and Knapp, F. F., Jr. "Method for Preparation of High Specific Activity Reactor-Produced Lutetium-177," U.S. Patent No. 6,716,353, Issued April 5, 2004.

Mirzadeh, S., Du, M., Beets, A. L. and Knapp, F. F., Jr. "New Method for Preparation of High Specific Activity Platinum-195m for Medical Therapy," U. S. Patent No. 6,751,280, Issued June 15, 2004.

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

Mirzadeh, S., Knapp, Jr., F. F. and Collins, E. D. "A Tandem Radioisotope Generator System for Preparation of Highly Concentrated Solutions of Tc-99m from Low Specific Activity Mo-99," U.S. Patent No. 5,774,782, Issued June 30, 1998.

Mirzadeh, S. and Kennel, S. J. "Bismuth-213 Generator," *Disclosed*.

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. "Radioiodinated Agent to Evaluate Gastrointestinal Disease by Urine Analysis" The "Wuerfel Test", *Disclosed*.

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.

Srivastava, P. C. and Hasan, A. "Enzyme-Targeted Diagnosis with Radiohalogenated Nucleosides The Enzymometer," *Disclosed*.

Srivastava, P. C. and Hasan, A. "Acyclonucleosides of 2-Nitroimidazole and Uses as Diagnostic and Therapeutic Agents", *Disclosed*.

Goodman, M. M., and Knapp, Jr., F. F. "Aminopropyl Thiophene Compounds," U.S. Patent 4,914,215, Patent Gazette, April 3, 1990.

Goodman, M. M. and Knapp, Jr., F. F. "Radiohalogenated Thienylamphetamine Derivatives for Evaluating Local Cerebral Blood Flow," U.S. Patent 4,900,539, Patent Gazette, p. 925, February 13, 1990.

McPherson, D. W., Fowler, J. S., and Wolf, A. "No Carrier Added (¹¹C)-Putrescine," U.S. Patent 4,874,600 (1990).

Goodman, M. M., and Knapp, Jr., F. F. "Radioiodinated Branched Carbohydrates," U.S. Patent 4,826,966, Patent Gazette, May 2, 1989.

Srivastava, P. C. "Mercuric Acetate Phenyl Maleimide Useful for Preparing Radiohalogenated Maleimides," U.S. Patent 4,812,577 (1989).

Meeting Presentations, Invited Talks and Published Abstracts

Knapp, F. F., Jr. "Rhenium-188 Radiopharmaceuticals – Current Status of Clinical Evaluation and Developing and Expected Future Applications," *For, Congress of the World Federation of Nuclear Medicine and Biology (WFNMB), Cape Town, South Africa, September 18-23, 2010.*

Knapp, F. D., Jr., "Availability and Current and Expected Clinical Use of Therapeutic Radiopharmaceuticals Prepared from Reactor-Produced Radioisotopes," *Invited Talk, For, Trends in Radiopharmaceuticals Conference, IAEA, Vienna, Austria, May 3-7, 2010.*

Knapp, F. F. "Production of Lutetium-177 – A Unique Opportunity to Provide an Important Therapeutic Radioisotope for Widespread Use," *IAEA Conference on Therapeutic Radiopharmaceuticals, Vienna, Austria, November 16-20 (2009).*

Knapp, F. F., Jr. "Reactor Production of High Specific Activity Lutetium-177 – Is Indirect Production Necessary and can the Costs be Justified for High, Multi Curie Levels ?," *Invited Lecture, IAEA RMC Meeting on "Development of Therapeutic Radiopharmaceuticals Based on ¹⁷⁷Lu for*

Radionuclide Therapy," Prague, Czech Republic, November 23-26, 2009.

Mirzadeh, S., Woodward, J., Standaert, R. F., Dai, S., Rondindone, A. J. and Kennel, S. "Inorganic Nanoparticle Monoclonal Antibody Conjugates," *3rd International Symposium on Radionuclide Therapy and Radiopharmaceutical Dosimetry (ISRTRD)*, held in conjunction with the Annual Meeting, Society of Nuclear Medicine, Toronto, Canada, June 13-17, 2009; *J. Nucl. Med.*, 50 (S2), 26P (Abstract # 100) (2009).

Mirzadeh, S. M. "Supply of Alpha Radioisotopes from ORNL," *Invited Lecture, for, 3rd International Symposium on Radionuclide Therapy and Radiopharmaceutical Dosimetry (ISRTRD)*, held in conjunction with the Annual Meeting, Society of Nuclear Medicine, Toronto, Canada, June 13-17, 2009.

Mirzadeh, S., Woodward, J., Standaert, R. F., Rondindone, A. J. and Kennel, S. J. "Inorganic Nanoparticle Monoclonal Antibody Conjugates," *18th International Symposium on Radiopharmaceutical Sciences*, Edmonton, Canada, July 12-17, 2007; *J. Label. Cmpds, Radiopharm.*, 52 (S1), S98 (2009).

Ponsard, B., Garland, M. A., Knapp, F. F. (Russ) Jr., S. Mirzadeh, S., Srivastava, S. C. and Mausner, L. F.. "Production of Sn-117m in the BR2 and HFIR Research Reactors," *18th International Symposium on Radiopharmaceutical Sciences*, Edmonton, Canada, July 12-17, 2007; *J. Label. Cmpds, Radiopharm.*, 52 (S1), S240 (# P140) (2009).

Bestaoui-Spurr, N., Cisar, A., Adams, T., Cosgrove, J. M. and Knapp, F. F., Jr. "Crystalline Inorganic Ion Exchanger for Rhenium-188 Generator," *Annual Meeting, American Nuclear Society*, Anaheim, CA, June 8-12, 2008.

Boll, R., Garland M. and Mirzadeh, S. "Production of Thorium-229 in the ORNL High Flux Isotope Reactor," *Annual Meeting, American Nuclear Society*, Anaheim, CA, June 8-12, 2008.

Knapp, F. F., Jr. "Availability of Therapeutic Radioisotopes for Nuclear Medicine and Oncology – The Important Role of Research Reactors," *Invited Lecture, 7th International Conference on Nuclear and Radiochemistry*, Budapest, Hungary, August 24-29, 2008.

Knapp, F. F., Jr. "The Important Role of Research Reactors for Production of Therapeutic Radioisotopes," *Invited Lecture, For, International Symposium on Radiopharmaceutical Therapy, (ISRT-08)*, Goa, India, August 28-30, 2008 (unable to attend).

Knapp, F. F., Jr. "The Important Role of Research Reactors for Production of Therapeutic Radioisotopes," *Invited Plenary Lecture, 6th International Conference on Isotopes (6ICI)*, Seoul, Korea, and May 12-16, 2008.

Mirzadeh, S. M. *Invited Lecture, for, Workshop on Supply Molybdenum-99 for Next Generation*, TRIUMF, Vancouver, BC, Canada, October 19-20, 2008.

Mirzadeh, S. "Retention of Radium-225 and Its Daughter Radioisotopes in Bone," *Invited, Annual Meeting, American Nuclear Society*, Anaheim, CA, June 8-12, 2008.

Ponsard, B., Garland, M. A., Knapp, F. F. (Russ) Jr., S. Mirzadeh, S., Srivastava, S. C. and Mausner, L. F.. "Production of Sn-117m in the BR2 and HFIR High-Flux Reactors," *Annual Meeting, American Nuclear Society*, Anaheim, CA, June 8-12, 2008.

Ponsard, B., Srivastava, S. C., Mausner, L. F., Knapp, F. F., Jr., Garland, M. A. and Mirzadeh, S. "Production of ^{117m}Sn in the BR2 High Flux Reactor," *6th International Conference on Isotopes (6/CI)*, Seoul, Korea, May 12-16, 2008.

Knapp, F. F., Jr. "Installation, Use and Quality Control (QC) of the Alumina-Based Tungsten-188/Rhenium-188 Generators Provided from ORNL," *Invited Lecture, 2nd International Conference on Radiopharmaceutical Therapy (ICRT'07), Ulaanbaatar, Mongolia, September 3-7, 2007*.

Knapp, F. F., Jr., Mirzadeh, S., Anderson, B. M., Bornhop, D. J. and Osso, J. "Auger-Emitters for Cancer Therapy – An Important Opportunity for the Development of new Targeted Radiopharmaceuticals," *Invited Lecture, 2nd International Conference on Radiopharmaceutical Therapy (ICRT'07), Ulaanbaatar, Mongolia, September 3-7, 2007*.

Almanza, C. L., Lovett, H. A., Schmitroth, F., Garland, M. A. and Mirzadeh, S. "Iso-Chain: A User-Friendly, Two-Group Nuclear Transmutation and Decay Code," *ANS Mid-Winter Meeting and Technology Expo*, Albuquerque, New Mexico, November 12-16, 2006.

Knapp, F. F., Jr., *Chairman and Organizer, Symposium on Clinical Evaluation of New Radiopharmaceuticals*, 9th World Federation of Nuclear Medicine and Biology (WFNMB) Congress, Seoul, Korea, Oct. 22-27, 2006 (*unable to attend*).

Knapp, F. F., Jr., *Invited Highlights Lecture*, "Highlights of Radiopharmacy and Radiochemistry Presentations," *European Nuclear Medicine Congress (EANM)*, Athens, Greece, Sept. 30-Oct. 4, 2006.

Knapp, F. F., Jr., *Invited Lecture*, "The Radiopharmaceutical Basics of Rhenium-188," *Symposium on Rhenium-188-Labelled Ligands for Therapy, European Nuclear Medicine Congress (EANM)*, Athens, Greece, Sept. 30-Oct. 4, 2006.

Knapp, F. F., Jr., *Invited Plenary Lecture*, "Radiopharmaceuticals for Nuclear Medicine and Oncology – The Central Role of Chemistry," *Mexican Chemical Society*, Mexico City, Mexico, September 24-28, 2006; *J. Mex. Chem. Soc. (Num. Especial 2)*, 50, 31 (2006).

Knapp, F. F., Jr. "Overview/Introduction - Action Sheet 6 - Reactor Production of Therapeutic Radioisotopes," NNSA-DOE US/Egypt Sister Laboratory Program, EAEA, Cairo, Egypt, July 10-12, 2006.

Knapp, F. F., Jr. "The Continuing Important Role of Research Reactors for Production of Therapeutic Radioisotopes," NNSA-DOE US/Egypt Sister Laboratory Program, EAEA, Cairo, Egypt, July 10-12, 2006.

Knapp, F. F., Jr. "The ORNL High Flux Reactor (HFIR) - Overview and Current Research," NNSA-DOE US/Libya Sister Laboratory Program, NNSA-DOE US/Egypt Sister Laboratory Program, EAEA, Cairo, Egypt, July 10-12, 2006.

Knapp, F. F., Jr. "Therapeutic Applications of Rhenium-188 in Nuclear Medicine and Oncology and Expected Future Perspectives," NNSA-DOE US/Libya Sister Laboratory Program, NNSA-DOE US/Egypt Sister Laboratory Program, EAEA, Cairo, Egypt, July 10-12, 2006.

Knapp, F. F., Jr. "Lutetium-177 – Issues for Production of Sufficiently High Curie levels Expected to be Required for Large-Scale Clinical Trials and Routine Patient Use," Co-Chairman, 2nd Research Coordination Meeting (CRP) on Therapeutic Radionuclide Generators, April 3-7, 2006, Milan, Italy.

Knapp, F. F., Jr. "Overview/Introduction - Action Sheet 1 - Reactor Production of Therapeutic Radioisotopes," NNSA-DOE US/Libya Sister Laboratory Program, Tajura Research Center, Libya, March 12-16, 2006.

Knapp, F. F., Jr. "The Continuing Important Role of Research Reactors for Production of Therapeutic Radioisotopes," NNSA-DOE US/Libya Sister Laboratory Program, Tajura Research Center, Libya, March 12-16, 2006.

Knapp, F. F., Jr. "The ORNL High Flux Reactor (HFIR) - Overview and Current Research," NNSA-DOE US/Libya Sister Laboratory Program, Tajura Research Center, Libya, March 12-16, 2006.

Knapp, F. F., Jr. "Therapeutic Applications of Rhenium-188 in Nuclear Medicine and Oncology and Expected Future Perspectives," NNSA-DOE US/Libya Sister Laboratory Program, Tajura Research Center, Libya, March 12-16, 2006.

Knapp, F. F., Jr. "Molybdenum-99 - Advantages of Direct Production from Molybdenum-98 Versus Fission Production," NNSA-DOE US/Libya Sister Laboratory Program, Tajura Research Center, Libya, March 12-16, 2006.

Knapp, F. F., Jr. "The ORNL High Flux Isotope Reactor – Overview and Current Research," DOE Sister Laboratory Program, Tajura Reactor, Tripoli, Libya, February 19, 2006.

Knapp, F. F., Jr. "The Continuing Important Role of Research Reactors for Production of Therapeutic Radioisotopes," DOE Sister Laboratory Program, Tajura Reactor, Tripoli, Libya, February 19, 2006.

Knapp, F. F., Jr. "Therapeutic Applications of Rhenium-188 in Nuclear Medicine and Oncology – Current Status and Expected Future Perspectives ,," DOE Sister Laboratory Program, Tajura Reactor, Tripoli, Libya, February 19, 2006.

Knapp, F. F., Jr. "Molybdenum-99 – Advantages of Direct Production versus Fission Production," DOE Sister Laboratory Program, Tajura Reactor, Tripoli, Libya, February 19, 2006.

Alonso, O., Chae, I.-H., Chung, J. K., Gutierrez, C., Kropp, J., Onsel, C., Peix, A., Plonska, E., Szilvasi, I., Knapp, F. F., Padhy, A. K., Storto, G. and Dondi, M. "Intravascular Radiation Therapy with liquid-Filled Rhenium-188 Balloon Catheter: results of an International Atomic Energy Agency (IAEA) Multicentre Study," *World J. Nucl. Med.*, 4, Suppl. 1, S-59 (2005).

Bernal, P., Chau, T., Erdenechimeg, S., Kumar, A., Srivastava, D., Papuan, P., Ang, S., Barrenechea, E. A., Jeong, J. M., Onkhuudai, P., Knapp, F. F., Sundram, F. X., Divgi, C., Buscombe, J., Dondi, M. and Padhy, A. K. "Rhenium-188 Lipiodol Therapy for Hepatocellular Carcinoma," *World J. Nucl. Med.*, 4, Suppl. 1, S-19 (2005).

Knapp, F. F., Jr. "The Continuing Important Role of High Flux Reactors for Production of Therapeutic Medical Radioisotopes," *Invited Lecture, International Symposium on Trends in Radiopharmaceuticals*, IAEA, Vienna, Austria, and November 14-18, 2005.

Knapp, F. F., Jr. "Therapeutic Applications of Rhenium-188 in Nuclear Medicine and Oncology – Current Status and Future Perspectives," *Invited Lecture, For, International Conference on Radiopharmaceutical Therapy, World Radiopharmaceutical Therapy Council, WFNMB*, Limassol, Cyprus, October 11-14, 2005; *World J. Nucl. Med.*, 4, Suppl. 1, S-59 (2005).

Knapp, F. F., Jr., Mirzadeh, S., Stabin, M. and Brill, A. B. "Therapy with High LET Radioisotopes – Can Sufficient Levels of Attractive Auger and Alpha Emitters be Produced to Make Their Use Practical ?," *Invited Lecture, For, International Conference on Radiopharmaceutical Therapy, World Radiopharmaceutical Therapy Council, WFNMB*, Limassol, Cyprus, October 11-14, 2005; *World J. Nucl. Med.*, 4, Suppl. 1, S-60 (2005).

Knapp, F. F., Jr. "Therapeutic Applications of Rhenium-188 in Nuclear Medicine and Oncology – Current Status and Future Perspectives," *Symposium on Radioisotope Therapy*, Havana, Cuba, June 24-28, 2005 (*Unable to attend*).

Knapp, F. F., Jr., Mirzadeh, S., Beets, A. L., Du., M., Klein, J. A. and Garland, M. "Direct Production of Lutetium-177 from Enriched Lu-176 in a High Flux Reactor – The Only Practical Route to Provide High Specific Activity/Multi-Curie Levels of Lu-177 Required fro Routine Clinical Use," *5th International Conference on Isotopes (5ICI)*, Brussels, Belgium, April 24-29, 2005.

Knapp, F. F., Jr. "The Important Role of Research Reactors for Production of Medical Radioisotopes," Department of Nuclear Medicine, Seoul National University Hospital, Seoul, Korea, April 15, 2003.

Knapp, F. F., Jr. "The Production and Use of Therapeutic Radionuclides for Nuclear Medicine and Oncology Applications," *Invited Plenary Lecture, HANARO 2005 Conference – The 10th Anniversary*, Korea Atomic Energy Research Institute (KAERI), April 11-13, 2005.

Kropp, J., Reynen, K., Koeckeritz, U. and Knapp, F . F. "Intracoronary Radiation Therapy: Placebo Controlled Study: A Report," *World J. Nucl. Med.*, 4, Suppl. 1, S-27 (2005).

Monroy-Guzman, F., Badillo Almaraz, V. E., Flores de la Torre, J. A., Cosgrove, J. M. and Knapp, F. F., Jr. "Hydroxyapatite-Based Mo-99/Tc-99m and W-188/Re-188 Generator Systems," *For, International Symposium on Trends in Radiopharmaceuticals*, IAEA, Vienna, Austria, November 14-18, 2005.

Chen, L., Wang, W. D., Chen, Y. C. and Knapp, F. F. "Generator Elution and Concentration of Rhenium-188," *51st Annual Meeting, Society of Nuclear Medicine*, *J. Nucl. Med.*, 44, Abstract # 1517 (2004).

Knapp, F. F., Jr. "Rhenium-188 and Lutetium-177– Reactor Production and Development and Applications of Therapeutic Radiopharmaceuticals," *Invited Lecture, 6th International Radiopharmaceutical Therapy Colloquium*, Pre-Congress Meeting, *8th Congress of the Asia and Oceania Federation of Nuclear Medicine and Biology*, Beijing, China, October 9, 2004.

Knapp, F. F., Jr. "Rhenium-188 – A Generator-Derived Radioisotope with Broad Therapeutic Applications in Nuclear Medicine and Oncology," *Invited Lecture, Research Coordination Meeting on Radionuclide Generator Technologies for Therapeutic Radionuclides*, International Atomic Energy Agency (IAEA), Vienna, Austria, October 4-7, 2004.

Knapp, F. F., Jr. "Rhenium-188 Agents for Liver Cancer Therapy – Current Status and Future Perspectives," *Inaugural Clinical Investigators Meeting for the Proposed European/Asia and Oceania Phase I/II Study on Rhenium-188-DEDL Lipiodol Intrahepatic Arterial Therapy of Hepatocellular Carcinoma*, Ferrara, Italy, September 9, 2004; Pre-Congress Symposium of the Annual European Association of Nuclear Medicine Congress, Helsinki, Finland, Sept. 4-8, 2004.

Knapp, F. F., Jr., Mirzadeh, S., Beets, A. L., Du, M. and Garland, M. "Reactor Production of High Specific Activity Lutetium-177," *Eur. J. Nucl. Med.*, 31, Suppl. 2, S387 (2004) (# 455).

Knapp, F. F., Jr., "Rhenium-188 for Cancer Therapy – A Reactor-Produced Radioisotope with Broad Applications in Nuclear Medicine and Oncology," *NNSA/NA-243 Sister Laboratory Expert Mission*, Institute for Nuclear Research (INR/ICN), Pitesti, Romania, September 13-15, 2004.

Knapp, F. F., Jr., "Reactor-Produced Therapeutic Radioisotopes," *NNSA/NA-243 Sister Laboratory Expert Mission*, Institute for Nuclear Research (INR/ICN), Pitesti, Romania, September 13-15, 2004.

Knapp, F. F., Jr. "Molybdenum-99 – Advantages for Direct Production from Mo-98 Versus Fission Production," *NNSA/NA-243 Sister Laboratory Expert Mission*, Institute for Nuclear Research (INR/ICN), Pitesti, Romania, September 13-15, 2004.

Knapp, F. F., Jr., Mirzadeh, S., Beets, a. L., Du. M. and Garland, M. "Reactor Production of High Specific Activity Lutetium-177," *Eur. J. Nucl. Med.*, 31 (Suppl. 2), S387 (2004).

Knapp, F. F., Jr. "New Developments with Unsealed Sources for Targeted Radiotherapy," *Invited Lecture*, 51st Bad Gastein Lecture, Bad Gastein, Austria, January 14-17, 2004.

Kropp, J., Reynen, K., Koeckeritz, U., Wunderlich, G., Schmeisser, A., Knapp, F. F. and Strasser, R. R. "Intracoronary Radiotherapy with Re-188 Liquid-Filled Balloon: The Dresden Prospective, Randomized, Placebo-Controlled, Double-Blind, In Stent Restenosis Trial (DRAIN)," *51st Annual Meeting, Society of Nuclear Medicine*, *J. Nucl. Med.*, 44, Abstract # 802 (2004).

Boll, R. A., Malkemus, D. W. and Mirzadeh, S. "Production of Actinium-225 for Alpha Particle Mediated Radiotherapy," *225th Annual Meeting, Amer. Chem. Soc.*, New Orleans, LA, March 23-27, 2003.

Boll, R. A., Malkemus, D. W. and Mirzadeh, S. "Production of Actinium-225 for Alpha Particle Mediated Radiotherapy," *Annual ANS Meeting*, San Diego CA, June 1-5, 2003.

Brown, K. K., Winegar, D. A., Franklin, M. C., Michaud, E. and Knapp, F. F., Jr. "PPAR-Gamma Activation Restores Insulin Sensitivity and Improves the Ability of the Diabetic Mouse Heart to Transport and Utilize Glucose and Reduces Myocardial Triacylglycerol Accumulation," *American Heart Association Meeting*, Orlando, FL, November 9-12, 2003.

Craig, A. M., Marsh, D. J., Boll, R. A., Schweitzer, G. K. and Mirzadeh, S. "Recoil-Separation of

^{221}Fr from ^{213}Bi from ^{225}Ac ," 225th Annual Meeting, Amer. Chem. Soc., New Orleans, LA, March 23-27, 2003.

Garland, M. A. and Mirzadeh, S. "Alternative Routes for Production of ^{229}Th , ^{225}Ra and ^{225}Ac ," 225th Annual Meeting, Amer. Chem. Soc., New Orleans, LA, March 23-27, 2003.

Garland, M. A. and Mirzadeh, S. "Reactor Production of Thorium-229," Annual ANS Meeting, San Diego CA, June 1-5, 2003.

Knapp, F. F., Jr. "Production of Medical Radioisotopes in the ORNL HFIR - When is High Flux Needed ?" *Invited Lecture*, ANS Winter Meeting, New Orleans, LA, November 16-20, 2003.

Knapp, F. F., Jr. "Targeted Radiotherapy with Rhenium-188 - An Attractive Radioisotope for Broad Clinical Applications , " *Invited Plenary Lecture*, European Nuclear Medicine Congress, Amsterdam, The Netherlands, August 23-27, 2003.

Knapp, F. F., Jr., Mirzadeh, S., Beets, A. L. and Du, M. "Therapeutic Radioisotope Production in the High Flux Isotope Reactor (HFIR)," *15th International Radiopharmaceutical Symposium on Radiopharmaceutical Chemistry*, Sydney, Australia, August 10-14, 2003.

Knapp, F. F., Jr., Mirzadeh, S., Beets, A. L. and Du, M. "Production of Therapeutic Radioisotopes in the ORNL High Flux Research Reactor (HFIR)," *Invited Lecture*, Eighth International Symposium, The Synthesis and Applications of Isotopes and Isotopically Labelled Compounds, Isotope Society, Boston, MA, June 1-5, 2003.

Knapp, F. F., Jr. "Current Clinical Applications of Rhenium-188 from the Tungsten-188/Rhenium-188 Generator," *Invited Lecture*, Mediterranean Society for Nuclear Medicine and Radiopharmaceuticals, Athens, Greece, May 28 - June 1, 2003.

Knapp, F. F., Jr., Mirzadeh, S., Beets, A. L. and Du, M. "Production of Therapeutic Radioisotopes in the ORNL High Flux Research Reactor (HFIR) for Applications in Nuclear Medicine, Oncology and Interventional Cardiology," *Invited, MARC VI Conference on Radioanalytical Chemistry*, Kona-Kailua, Hawaii, April 7-11, 2003.

Knapp, F. F., Jr. "New Developments with Unsealed Sources for Targeted Radiotherapy," *Invited Lecture*, Annual Meeting, German Society of Nuclear Medicine, Essen, Germany, April 3-6, 2003 (Prof. Dr. Dr. A. Bockisch, Organizer).

Mirzadeh, S. "Actinium-225 Production at the Oak Ridge National Laboratory," *Invited Lecture*, Alpha-Emitting Isotopes Workshop, Dubna, Russia, April 26, 2003.

Mirzadeh, S., Du., M., Beets, A. L. and Knapp, F. F., Jr. "Reactor Production of High Specific Activity Platinum-195m for Therapeutic Applications," *Invited Lecture*, Annual Meeting, American Chemical Society, New York, NY, September 7-11, 2003.

Knapp, F. F., Jr. and Biersack, H.-J., Co-Chairs, *Round Table Discussion* on "Current Status and Future Clinical Applications of the Tungsten-188/Rhenium-188 Generator," *World Federation of Nuclear Medicine and Biology (WFNMB) Meeting*, Santiago, Chile, September 29, 2002.

Knapp, F. F., Jr. "Production of Therapeutic Radioisotopes in the High Flux Isotope Reactor

(HFIR)," *Invited Lecture, COST D18 Meeting*, Heidelberg, Germany, July 22-25, 2002.

Knapp, F. F., Jr. "Rhenium-188 - Advantages and Clinical Potential for Use of a Readily Available, Cost Effective Therapeutic Radioisotope for Applications in Nuclear Medicine, Oncology and Interventional Cardiology," *Invited Lecture, 25 Int. Symp. Radioactive Isotopes in Clinical Medicine and Research*, Bad Gastein, Austria, January 8-11, 2002; *Eur. J. Nucl. Med.*, 29, S5 (2002).

Kropp, J., Reynen, K., Koeckeritz, U., Wunderlich, G., Schmeisser. A., Strasser, R. H. and Knapp, F. F., Jr. "Prevention of In-Stent Restenosis with Liquid-Filled ¹⁸⁸Re Balloon: The Dresden In-Stent Restenosis Trial (DIRRT)," *World Federation of Nuclear Medicine and Biology Congress*, Santiago, Chile, Sept. 30-Oct. 4, 2002; *World J. Nucl. Med.*, 1, Suppl. 2, S13 (Abstract # 22) (2002).

Kropp, J., Schmidt, S., Wunderlich, G., Schendtke, K. U., Breidert, M., McPherson, D. W. and Knapp, F. F., Jr. "A New and Simple test for Exocrine Function of the Pancreas: Analysis of the Urine After Oral Application of an I-131-Labeled Triglyceride," *World Federation of Nuclear Medicine and Biology Congress*, Santiago, Chile, Sept. 30-Oct. 4, 2002; *World J. Nucl. Med.*, 1, Suppl. 2, S50 (Abstract # 103) (2002).

Liepe, K., Hliscs, R., Knapp, F. F., Jr. and Kropp, J. "Dosimetry and Therapeutic Effect of ¹⁸⁸Re-HEDP in Human Prostate Cancer Skeletal Metastases," *Third North American Symposium on Skeletal Complications of Malignancy*, National Institutes of Health, Bethesda, MD, April 24-27, 2000.

WP70\WPFILES\PUBLIST - FFK: March 9, 2010