Anthony J McGoron

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**EDUCATION**

# Degree Institution Field Dates

Postdoc University of Cincinnati Pharmacology/Cell Biophysics 1991-1994

PhD Louisiana Tech University Biomedical Engineering 1988-1991

MSE Wright State University Systems/Biomedical Engineering 1986-1988

BSE Wright State University Biomedical Engineering 1983-1986

**FULL-TIME ACADEMIC EXPERIENCE**

# Institution Rank Field Dates

Florida International U Interim Chair Biomedical Engineering June 2007-Dec 2010

Florida International U Associate Professor Biomedical Engineering 2005-present

Florida International U Assistant Professor Biomedical Engineering 1999-2005

University of Cincinnati Research Assist Prof Nuclear Medicine/ Medical Physics 1994-1999

### PUBLICATIONS IN DISCIPLINE

**a. Refereed Publications**

1. Lei, T., S. Srinivasan, Y. Tang, R. Manchanda, A. Nagesetti, A. Fernandez-Fernandez, A.J. McGoron. Comparing Cellular Uptake and Cytotoxicity of Targeted Drug Carriers in Cancer Cell Lines with Different Drug Resistance Mechanisms. Nanomedicine: Nanotechnology, Biology and Medicine. 2011 (in press) [doi:10.1016/j.nano.2010.11.004](http://dx.doi.org/10.1016/j.nano.2010.11.004)
2. Haider, W., N. Munroe, V. Tek, P. K. S. Gill, Y. Tang, A. J. McGoron. Cytotoxicity of Metal Ions Released from Nitinol Alloys on Endothelial Cells. *Journal of Materials Engineering and Performance.* 2011. (in press) DOI: 10.1007/s11665-011-9884-5.
3. Weeks, O.I., E. Villamor, M. Tracey, P. Stoddard, S. Shapiro, J. Makemson, R. Garcia, S. Gavassa, T. Philippi, T. Pitzer, B. Dewsbury, G. Narasimhan, A. McGoron, A. Tashakkori. QBIC, an interdisciplinary and quantitative biological sciences curriculum: concept to implementation. *Journal of Education Science*. 12(1):11-14, 2011.
4. Tang, Y., T. Lei, R. Manchanda, A. Nagesetti, A. Fernandez- Fernandez, S. Srinivasan, A.J. McGoron. Simultaneous Delivery of Chemotherapeutic and Thermal-Optical Agents to Cancer Cells by a Polymeric (PLGA) Nanocarrier: an In Vitro Study. *Pharm Res* (2010) 27:2242–2253. DOI 10.1007/s11095-010-0231-6.
5. Zhang, Z. A.J. McGoron, ET Crumpler, and CZ Li. Co-culture based blood-brain barrier in vitro model, a tissue engineering approach using immortalized cell lines for drug transport study. *Appl Biochem Biotechnol* (2011) 163:278–295 DOI 10.1007/s12010-010-9037-6.
6. Wang, Q., A.J. McGoron, R. Bianco, Y. Kato, L. Pinchuk, and R.T. Schoephoerster. *In Vivo* Assessment of a Novel Polymer (SIBS) Trileaflet Heart Valve. Journal of Heart Valve Disease. 2010, 19(4):499-505
7. Wang, J., M. del Valle, M. Goryawala, J. Franquiz and A. McGoron. Computer Assisted Detection and Quantification of Lung Tumors in Respiratory Gated PET/CT Images: Phantom Study. *Med Biol Eng Comput*. 2010, 48:49–58.
8. Manchanda, R., A. Fernandez-Fernandez, A. Nagesetti, and A.J. McGoron, Preparation and characterization of a polymeric (PLGA) nanoparticulate drug delivery system with simultaneous incorporation of chemotherapeutic and thermo-optical agents*.* *Colloids and Surfaces B: Biointerfaces*, 2010, 75:260–267.
9. Tang, Y. and A.J. McGoron. Combined Effects of Laser-ICG Photothermotherapy and Doxorubicin Chemotherapy on Ovarian Cancer Cells. *Journal of Photochemistry and Photobiology B: Biology* 2009, 97:138-144.
10. Wang. Q., A.J. McGoron, L. Pinchuk, R.T Schoephoerster. A Novel Small Animal Model for Biocompatibility Assessment of Polymeric Materials for Use in Prosthetic Heart Valves. *Journal of Biomedical Materials Research Part A*. 2009 (http://dx.doi.org/10.1002/jbm.a.32562).
11. Gulec, S.A., R. Selwyn, R. Weiner, P. Flamen, G. Mesoloras, D. Lamonica, J. Machac, G. Hiatt, O. Ugur, A. McGoron. Radiomicrosphere Therapy: *Nuclear Medicine Considerations, Guidelines and Protocols. J International Oncology*. 2009, 2(1):26-39.
12. McGoron, A.J., M. Capille, M.F. Georgiou, P. Sanchez, J. Solano, M. Gonzalez-Brito, and J.W. Kuluz. Brain Perfusion SPECT Analysis using Reconstructed ROI Maps of Radioactive Microsphere derived Cerebral Blood Flow and Statistical Parametric Mapping. *BMC Medical Imaging*, 2008, 8:4.
13. Wang, J., J. Byrne, J. Franquiz, A. McGoron. Evaluation of an amplitude-based sorting algorithm to reduce lung tumor blurring in PET images using 4D NCAT phantom. *Comput Meth Programs Biomed*. 2007, 87(2):112-122.
14. McGoron, A.J., M. Xuming, M.F. Georgiou, and J.W. Kuluz. Computer Phantom Study of Brain PET Glucose Metabolism Imaging Using a Rotating SPECT/PET Camera. *Computers in Biology and Medicine*. 2005, 35:511-531.
15. Kassing, W.M, A.J. McGoron, S.R. Thomas, H.R. Elson, D.W. Pipes. Monte Carlo Calculations of Dose Distribution for Intramural Delivery of Radioisotopes Using a Direct Injection Balloon Catheter. *Cardiovas Rad Med*. 2002, 3:44-48.
16. McGoron, A.J., C.H. Joiner, M. Palascak, W.J. Claussen and R.S. Franco. Dehydration Of Mature And Immature Sickle Red Blood Cells During Fast Oxygenation/Deoxygenation Cycles: Role Of KCl Cotransport And Extracellular Calcium. *Blood*. 2000, 95:2164-2168.
17. McGoron, A.J., W.M. Kassing, S.R. Thomas, R.C. Samaratunga, R.G. Pratt, H.R. Elson, D.W. Pipes. Intravascular Irradiation Using Re-186 Liquid-Filled Balloon Catheters: Correlation Between Experimental and Theoretical Studies*. Cardiovas Rad Med*. 1999, 1:368-375.
18. McGoron, A.J., D. Biniakiewicz, R.W. Millard, A. Kumar, S.C. Kennedy, N.J. Roszell, M. Gabel, C. Huth, R.A. Walsh and M.C. Gerson. Myocardial Kinetics of 99m-Technetium-Q Agents: Studies in Isolated Cardiac Myocte, Isolated Perfused Rat Heart and Canine Regional Myocardial Ischemia Models. *Investigative Radiology.* 1999, 34:704-717.
19. Lenihan, D.J., A.J. McGoron, M. Gabel, R.A. Walsh, and M.C. Gerson. Reliability of Technetium-99m Q12 and Thallium-201 Myocardial Activity Measurements after Triphenyl Tetrazolium Chloride Myocardial Staining by Perfusion. *Investigative Radiology*. 1999, 34:276-291.
20. Rosenbaum, A.F., A.J. McGoron, R.W. Millard, M. Gabel, D. Biniakiewicz, R.A. Walsh and M.C. Gerson. Uptake of Seven Myocardial Tracers During Increased Myocardial Blood Flow by Dobutamine Infusion. *Investigative Radiology*. 1999, 34:91-98.
21. Thomas, S.R., L. Gradon, S.E. Pratsinis, R.G. Pratt, G.P. Fotou, A.J. McGoron, A.L. Podgorski and R.W. Millard. Perfluorocarbon Compound Aerosols for Delivery to the Lung as Potential F-19 NMR Reporters of Regional Pulmonary pO2. *Invest Radiol.* 1997, 32:29-38.
22. Pratt, R.G., J. Zheng, B.K. Stewart, Y. Shiferaw, A.J. McGoron, R.C. Samaratunga and S.R. Thomas. Application of a 3D Volume Protocol for Mapping Oxygen Tension (pO2) in Perfluorocarbons at Low Field. *Mag Res Med.* 1997, 37:307-313.
23. Meleca, M.J., A.J. McGoron, M.C. Gerson, R.W. Millard, M. Gabel, D. Biniakiewicz, N.J. Roszell and R.A. Walsh. Unique Flow versus Uptake Characteristics of Tc-99m Q3: Comparisons of Perfusion Tracers in a Canine Model of Myocardial Ischemia. *J Nuc. Med.* 1997, 38:1847-1856.
24. McGoron, A.J., P.K. Nair, R.W. Schubert. Michaelis-Menten Kinetics Model of Oxygen Consumption by Rat Brain Slices Following Hypoxia. *Annals Biomed Eng.* 1997, 25:565-572.
25. Lee, M.T.B., C.J. Seliskar, W.R. Heineman and A.J. McGoron. Microelectrode Sensors for *In Vivo* Detection of Radiopharmaceuticals. *J Am. Chem Soc*. 1997, 119:6434-6435.
26. McGoron, A.J., M.C. Gerson, D.S. Biniakiewicz, N.J. Roszell, L.C. Washburn, and R.W. Millard. Extraction and Retention of 99mTc Q12, 99mTc Sestamibi and 201Tl in Isolated Rat Heart During Coronary Acidemia. *Eur J Nuc Med.* 1997, 24:1479-1486.
27. McGoron, A.J., D.S. Biniakiewicz, L.C. Washburn, R.W. Millard and M.C. Gerson. Effects of Ouabain on 99mTc Q12 and 201Tl Uptake and Retention by Isolated Rat Hearts. *J. Nucl. Med.* 1996, 37:752-756.
28. Gerson, M.C. and A.J. McGoron. 99mTc Glucarate: What Will Be Its Clinical Role? *J Nucl Cardiol*. 1997, 4:336-340**.**
29. Thomas, S.R., R.G. Pratt, R.W. Millard, R. C. Samaratunga, Y. Shiferaw, A.J. McGoron and K.K. Tan. In Vivo pO2 Imaging in the Porcine Model with Perfluorocarbon F-19 NMR at Low Field.  *Mag Reso. Imaging.* 1996, 14:103-114.
30. Stern, S.A., S.C Dronen, A.J. McGoron, X. Wang, K. Chaffins, R. Millard, P.E. Keipert and N.S. Faithfull. The Effect of Supplemental Perfluorocarbon Administration on Hypotensive Resuscitation of Severe Uncontrolled Hemorrhage. *A. J Emergency Med.* 1995, 13:269-275.
31. Gerson, M.C., R.W. Millard, A.J. McGoron, M. Gabel, L.C. Washburn, D. Biniakiewicz, R.C. Elder, E. Deutsch and R.A. Walsh. Myocardial Uptake and Kinetic Properties of 99mTc Q3 in Dogs.  *J Nucl Med.* 1994, 35:1698-1706.
32. Gerson, M.C., R.W. Millard, N.J. Roszell, A.J. McGoron, G. Gabel, L.C. Washburn, D. Biniakiewicz, D. Blankenship, W.H. Mallin, R.C. Elder, E. Deutsch and R.A. Walsh. Kinetic Properties of 99mTc Q12 in Canine Myocardium.  *Circulation*. 1994, 89:1291-1300.
33. McGoron, A.J., R. Pratt, J. Zhang, Y. Shiferaw, S. Thomas and R. Millard. Perfluorocarbon Distribution to Liver, Lung and Spleen of Emulsions of Perfluorotributylamine (FTBA) in Pigs and Rats and Perfluoro Octylbromide (PFOB) in Rats and Dogs by 19F NMR Spectroscopy. Vth International Symposium on Blood substitutes, San Diego, CA, 1993. Full paper published in *Artificial Cells, Blood Subs.& Immob Biotech.* 1994, 22:1243-1250.
34. Millard, R.W. and A.J. McGoron. Lung Functions After Intravenous or Intraperitoneal Administration of Perfluoro Octylbromide (PFOB) or Perfluorotributylamine (FTBA). Vth International Symposium on Blood substitutes, San Diego, CA, 1993. Full paper published in *Artificial Cells, Blood Subs & Immob Biotech.* 1994, 22:1251-1258.
35. He, P. and A. McGoron. Parameter Estimation For Nonlinear Frequency Dependent Attenuation In Soft Tissue. *Ultrasound Med Biol.* 1989, 15:757-763.

**b. Books/Book Chapters**

1. Li, C.Z, A McGoron. "Special Issue on Biomedical Engineering in the American Journal of BioMedical Science", NWPII Publications. 2009. ISSN: 1937-9080
2. McGoron, A, C.Z. Li, W.C. Lin. IFMBE Proceedings 24. Springer, 2009.
3. McGoron, A.J., J Franquiz. Emission Imaging: SPECT and PET*.* In Biomedical Technology and Devices Handbook. J. Moore and G. Zouridakis (eds). 2004.
4. Gerson, M.C., A.J. McGoron, N.J. Roszell, D. Biniakiewicz and R.W. Millard. Myocardial Perfusion Imaging: Radiopharmaceuticals and Tracer Kinetics. In: M.C. Gerson (ed): *Cardiac Nuclear Medicine (third edition)*. McGraw-Hill, Inc, New York, 1997, pp 3-27.

**c. Conference Proceedings/Papers/Presentations at Meetings**

**(1) Refereed Invited Papers and Presentations**

1. McGoron, A.J. Multimodal drug delivery for imaging and therapy of cancer using PLGA nanoparticles. Particles 2010. Buena Vista, FL. May 22-25, 2010.
2. McGoron, A.J. PET/CT: New Agents, New Software, and new Technology for Improved Y-90 Microsphere SIRT. Y-90 Radiomicrosphere Therapy: Treatment Planning and Dosimetry Workshop. Miami, FL. October 24, 2009.
3. McGoron, A.J., Radioisotopes in Nuclear Medicine. Proceedings of the 2002 Americas Nuclear Energy Symposium. Full paper on CD from the US Department of Energy (<http://anes2002.hcet.fiu.edu/> ProceedingCD/s7mcg.pdf). Miami, FL, October 16-18, 2002.
4. McGoron, A.J. Cardiac Radiopharmaceuticals: What is the Ideal Agent. Proceedings of the Southeastern Chapter of the Society of Nuclear Medicine 4th Annual Meeting. 2000, Pg III1-III12.

**(2) Conferrence Proceedings**

1. S Srinivasan, R Manchanda, T Lei, Y Tang, AJ McGoron. Targeted delivery of indocyanine green and doxorubicin simultaneously loaded poly(lactide-co-glycolide) (PLGA) nanoparticles: An in vitro study. An AACR Special Conference on Nano in Cancer. January 12-15, 2011, Miami, Fl.
2. Tang, Y., L. Tingjun, R. Manchanda, A Nagesetti, A. Fernandez-Fernandez, S. Srinivasan, A.J. McGoron. A Novel Dual-agent Loaded PLGA Nanoparticle for the Simultaneous Delivery of Chemotherapy and Hyperthermia. Biomedical Engineering Society Annual Meeting, Austin, TX. Oct 6-9, 2010.
3. Fernandez-Fernandez, A., R. Manchanda, T. Lei, D.A. Carvajal, and A.J. McGoron. Novel IR-820-PEG-Diamine Nanoconjugates for Combined Imaging and Therapy: in vitro Studies. Biomedical Engineering Society Annual Meeting, Austin, TX. Oct 6-9, 2010.
4. Manchanda, R., Y.C. Huang, T. Lei, A. Fernandez-Fernandez, A.J. McGoron. Novel Biodegradable PGD Polymeric Nanoparticles: Preparation and Characterization. Biomedical Engineering Society Annual Meeting, Austin, TX. Oct 6-9, 2010.
5. Tang, Y. and A.J. McGoron. The Role of Temperature Increase Rate in Combinational Hyperthermia Chemotherapy Treatment. Proc. SPIE, Vol. 7565, doi:10.1117/12.842587. 2010
6. Fernandez‐Fernandez, A., D.A. Carvajal and A.J. McGoron. Measuring In Vivo Effects of Chemotherapy Treatment on Cardiac Permeability. IFMBE Proceedings 32, p. 126-129. 2010.
7. Lei, T., S. Srinivasan, Y. Tang, R. Manchanda, A. Fernandez‐Fernandez, A.J. Mcgoron. Targeted Delivery of Doxorubicin by PLGA Nanoparticles Increases Drug Uptake in Cancer Cell Lines. IFMBE Proceedings 32, p. 224-227. 2010.
8. Manchanda, R., T. Lei, Y. Tang, A. Fernandez‐Fernandez, A.J. McGoron. Cellular Uptake and Cytotoxicity of a Novel ICG-DOX-PLGA Dual Agent Polymer Nanoparticle Delivery System. IFMBE Proceedings 32, p. 228-231. 2010.
9. Goryawala, M., M. Guillen, R. Bhatt, A. Mcgoron, M. Adjouadi. A comparative study on the performance of the parallel and distributing computing operation in MatLab. Proceedings - International Conference on Advanced Information Networking and Applications, AINA, pp. 150-157, 2010.
10. Haider, W., N. Munroe, V. Tek, A. J. McGoron, P. K. S. Gill, C. Pulletikurthi, S. Pandya. *An Assessment of Metal Ions Release from Ternary Nitinol Alloys under Static and Dynamic Conditions-Part I.* SMST 2010, *Proceedings of The International Conference for Shape Memory and Superelastic Technologies*, May 16-20, 2010, Pacific Grove, CA.
11. Haider, W., N. Munroe, V. Tek, A. J. McGoron**,** P. K. S. Gill, C. Pulletikurthi, S. Pandya. *Influence of Surface Treatments on Corrosion Resistance and Metal Ion Leaching.* SMST 2010, *Proceedings of The International Conference for Shape Memory and Superelastic Technologies* , May 16-20, 2010, Pacific Grove, California. . W. Haider, N. Munroe, V. Tek, A. J. McGoron, P. K. S. Gill, C. Pulletikurthi, S. Pandya. *Effect of Surface Treatments on Corrosion Resistance and Metal* Ion Leaching. SMST 2010, The International Conference for Shape Memory and Superelastic Technologies, May 16-20, 2010, Pacific Grove, CA.
12. Haider, W., N. Munroe, V. Tek, A. J. McGoron, C. Pulletikurthi, P. K. Singh Gill, S. Pandya. Corrosion Resistance and Surface Analysis of Treated Nitinol Alloys. *Biointerface*, October 26-28, 2009, San Mateo, CA
13. Haider, W., N. Munroe, S. Shah, A. J. McGoron, C. Pulletikurthi, P. K. S. Gill. Cytotoxicity Assessment of Corrosion Products of Nitinol alloys. *Materials and Processes for medical devices-Conference and Exhibition,* August 10-12, 2009, Minneapolis, MN.
14. Haider, W., N. Munroe, V. Tek, Y. Tang, A. J. McGoron, C. Pulletikurthi, P. K. Singh Gill, S. Pandya. Comparing the Biocompatibility of Electropolished and Magnetoelectropolished Nitinol, *Biointerface.* October 26-28, 2009, San Mateo, CA.
15. Haider, W., N. Munroe, S. Shah, A. J. McGoron, C. Pulletikurthi, P. K. S. Gill. Cytotoxicity Assessment of Corrosion Products of Nitinol Alloys. *Materials and Processes for medical devices-Conference and Exhibition,* August 10-12, 2009, Minneapolis, MN.
16. Haider, W., N. Munroe, Y. Tang, A. J. McGoron, C. Pulletikurthi, P. K. S. Gill. Endothelialization of Ternary Nitinol Alloys. *Materials and Processes for medical devices-Conference and Exhibition,* August 10-12, 2009, Minneapolis, MN.
17. Pulletikurthi, C., N. Munroe, S. Shah, A. J. McGoron, W. Haider and P. K. S. Gill. Effect of Surface Treatments on the Cytotoxicity of Porous Nitinol. *Materials and Processes for Medical Devices-Conference and Exhibition*, Aug 10-12, 2009, Minneapolis, MN.
18. Tang, Y. and A. J. McGoron. Interaction of dye-enhanced photothermotherapy and chemotherapy in the treatment of cancer; an in vitro study. Proceedings of SPIE vol. 7164, (2009) DOI:10.1117/12.808448.
19. Wang, J., J. Franquiz, and A.J. McGoron. Comparison of Respiratory Motion Correction Methods in PET Lung Tumor Quantification. IFMBE Proceedings 24, p. 63-66. 2009.
20. Manchanda, R., A. Nagesetti, A. Fernandez-Fernandez, and A.J. McGoron Development of a PLGA Nanoparticle Drug Delivery System Containing Imaging/Hyperthermia and Chemotherapy Agents. IFMBE Proceedings 24, p. 183-184. 2009.
21. Liu, T., A. Bhanushali, J. Martinez, A.J. McGoron, and R.R. Panepucci. Optical Characterization with the Waveguide Microgripper. IFMBE Proceedings 24, p. 187-188. 2009.
22. Fernandez-Fernandez, A., A.J. McGoron, and D.A. Carvajal. Application of a Fluorescent Multiple Indicator Method to Study Changes in Cardiac Permeability with Chemotherapy. IFMBE Proceedings 24, p. 299-300. 2009.
23. Carvajal, D.A., A. Fernandez-Fernandez, and A.J. McGoron. Development of Matlab Algorithm to Process Pressure Waveforms from Isolated Perfused Heart Experiments. IFMBE Proceedings 24, p. 315-316. 2009.
24. Haider, W., N. Munroe, Y. Tang, A. J. McGoron, C. Pulletikurthi, P. K. S. Gill, Endothelialization of Surface Treated Nitinol Alloys, *Third International Conference on Mechanics of Biomaterials and Tissues,* December13-17, 2009, Clearwater Beach, Florida.
25. Haider, W., N. Munroe, S. Shah, A. J. McGoron, C. Pulletikurthi, P. K. S. Gill, Cytoxicity Assessment of Corrosion Products of Nitinol Alloys, *Materials and Processes for medical devices-Conference and Exhibition,* August10-12, 2009, Minneapolis, Minnesota.
26. Haider, W., N. Munroe, Y. Tang, A. J. McGoron, C. Pulletikurthi, P. K. S. Gill, Endothelialization of Ternary Nitinol Alloys, *Materials and Processes for medical devices-Conference and Exhibition,* August10-12, 2009, Minneapolis, Minnesota.
27. Pulletikurthi, C., N. Munroe, S. Shah, A. J. McGoron, W. Haider and P. K. S. Gill, Effect of Surface Treatments on the Cytotoxicity of Porous Nitinol, *Materials and Processes for Medical Devices-Conference and Exhibition*, Aug 10-12, 2009, Minneapolis, Minnesota.
28. [Wang](http://spiedigitallibrary.aip.org/vsearch/servlet/VerityServlet?KEY=SPIEDL&possible1=Wang%2C+Jiali&possible1zone=author&maxdisp=25&smode=strresults&aqs=true), J., [M. del Valle](http://spiedigitallibrary.aip.org/vsearch/servlet/VerityServlet?KEY=SPIEDL&possible1=del+Valle%2C+Misael&possible1zone=author&maxdisp=25&smode=strresults&aqs=true), [J. Franquiz](http://spiedigitallibrary.aip.org/vsearch/servlet/VerityServlet?KEY=SPIEDL&possible1=Franquiz%2C+Juan&possible1zone=author&maxdisp=25&smode=strresults&aqs=true), and [A. McGoron](http://spiedigitallibrary.aip.org/vsearch/servlet/VerityServlet?KEY=SPIEDL&possible1=McGoron%2C+Anthony&possible1zone=author&maxdisp=25&smode=strresults&aqs=true). [Automated lung tumor detection and quantification for respiratory gated PET/CT images](http://spiedigitallibrary.aip.org/vsearch/servlet/VerityServlet?KEY=SPIEDL&smode=strresults&maxdisp=25&possible1=McGoron%2C+Anthony&possible1zone=author&OUTLOG=NO&aqs=true&viewabs=PSISDG&key=DISPLAY&docID=1&page=0&chapter=0). [Proc. SPIE 6914](http://spiedigitallibrary.aip.org/dbt/dbt.jsp?KEY=PSISDG&Volume=6914&Issue=1), 69144G (2008).
29. [Goryawala](http://spiedigitallibrary.aip.org/vsearch/servlet/VerityServlet?KEY=SPIEDL&possible1=Goryawala%2C+Mohammed&possible1zone=author&maxdisp=25&smode=strresults&aqs=true), M., [M. Del Valle](http://spiedigitallibrary.aip.org/vsearch/servlet/VerityServlet?KEY=SPIEDL&possible1=Del+Valle%2C+Misael&possible1zone=author&maxdisp=25&smode=strresults&aqs=true), [J. Wang](http://spiedigitallibrary.aip.org/vsearch/servlet/VerityServlet?KEY=SPIEDL&possible1=Wang%2C+Jiali&possible1zone=author&maxdisp=25&smode=strresults&aqs=true), [J. Byrne](http://spiedigitallibrary.aip.org/vsearch/servlet/VerityServlet?KEY=SPIEDL&possible1=Byrne%2C+James&possible1zone=author&maxdisp=25&smode=strresults&aqs=true), [J. Franquiz](http://spiedigitallibrary.aip.org/vsearch/servlet/VerityServlet?KEY=SPIEDL&possible1=Franquiz%2C+Juan&possible1zone=author&maxdisp=25&smode=strresults&aqs=true), and [A. McGoron](http://spiedigitallibrary.aip.org/vsearch/servlet/VerityServlet?KEY=SPIEDL&possible1=McGoron%2C+Anthony&possible1zone=author&maxdisp=25&smode=strresults&aqs=true). [Low-cost respiratory motion tracking system](http://spiedigitallibrary.aip.org/vsearch/servlet/VerityServlet?KEY=SPIEDL&smode=strresults&maxdisp=25&possible1=McGoron%2C+Anthony&possible1zone=author&OUTLOG=NO&aqs=true&viewabs=PSISDG&key=DISPLAY&docID=2&page=0&chapter=0). [Proc. SPIE 6918](http://spiedigitallibrary.aip.org/dbt/dbt.jsp?KEY=PSISDG&Volume=6918&Issue=1), 691822 (2008).
30. [del Valle](http://spiedigitallibrary.aip.org/vsearch/servlet/VerityServlet?KEY=SPIEDL&possible1=del+Valle%2C+Misael&possible1zone=author&maxdisp=25&smode=strresults&aqs=true), M., [M. Goryawala](http://spiedigitallibrary.aip.org/vsearch/servlet/VerityServlet?KEY=SPIEDL&possible1=Goryawala%2C+Mohammed&possible1zone=author&maxdisp=25&smode=strresults&aqs=true), and [A. J. McGoron](http://spiedigitallibrary.aip.org/vsearch/servlet/VerityServlet?KEY=SPIEDL&possible1=McGoron%2C+Anthony+J.&possible1zone=author&maxdisp=25&smode=strresults&aqs=true). [Dynamic lung tumor phantom coupled with chest motion](http://spiedigitallibrary.aip.org/vsearch/servlet/VerityServlet?KEY=SPIEDL&smode=strresults&maxdisp=25&possible1=McGoron%2C+Anthony&possible1zone=author&OUTLOG=NO&aqs=true&viewabs=PSISDG&key=DISPLAY&docID=3&page=0&chapter=0). [Proc. SPIE 6918](http://spiedigitallibrary.aip.org/dbt/dbt.jsp?KEY=PSISDG&Volume=6918&Issue=1), 69182N (2008).
31. A.J. McGoron and A. Fernandez-Fernandez. Development of a Multiple Indicator Dilution Technique using Fluorescent Dyes to Measure Cardiac Capillary Permeability. Proceedings of the ASME 2008 Summer Bioengineering Conference.
32. McGoron, A., J. Wang, S. Erickson, M. Goryawala. Quantitative Comparison of Two Gating Schemes in Lung PET: Simulations with Computer Phantom. *Biomedical Engineering Recent Developments.* Medical and Engineering Publishers Inc, 27-32, 2008.
33. McGoron, A.J., A. Fernandez. Applications of ICG and IR-820: Stability of Optical Properties Versus Hyperthermia Properties. *Biomedical Engineering Recent Developments.* Medical and Engineering Publishers Inc, 39-42, 2008.
34. Iyer, K., N. Duraiswamy, J. Villar, R. Ramirez, S. White, A. McGoron, R.T. Schoephoerster. Hemocompatibility Characterization of Polymers for Use in Intravascular Applications. . *Biomedical Engineering Recent Developments.* Medical and Engineering Publishers Inc, 201-202, 2008.
35. Chowdhury, M., Y. Tang, and A.J. McGoron. Ovarian Cancer Therapies Combining the Modalities of Hyperthermia and Chemotherapy. Proceeding of the Biomedical Engineering Society. Holywood, CA, 2007.
36. Wang, J., A.J. McGoron, J. Byrne, J. Franquiz. Evaluation of a Novel PET Respiratory Gating Algorithm to Reduce Lung Tumor Blurring using the 4D NCAT Phantom. Medical Physics 33(6) p. 2278, 2006.
37. Wang, J., A.J. McGoron, J. Byrne, J. Franquiz. A Novel Respiratory Gating Design for Motion Tracking in PET/CT Imaging. Proceeding of the Biomedical Engineering Society. Chicago, IL, 2006.
38. Lin, W. and A. McGoron. In Vivo Characterization of Myocardial Infarction using Optical Spectroscopy. [Proc. SPIE](http://spiedigitallibrary.aip.org/dbt/dbt.jsp?KEY=PSISDG&Volume=6918&Issue=1) 6078A, 2006.
39. Capille M, A. McGoron, M. Georgiou, J. Kuluz, P. Sanchez: Validation of SPECT CBF in Piglet Brain Injury by Registration of Reconstructed Microspheres. Radiological Society of North America, Scientific Assembly and Annual Meeting Program - Abstract #000WNM-p, 2004.
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**d. Refereed papers and conference proceedings for Curriculum Development Activities**

1. Weeks, O.I., E. Villamor, M. Tracey, P. Stoddard, S. Shapiro, J. Makemson, R. Garcia, S. Gavassa, T. Philippi, T. Pitzer, B. Dewsbury, G. Narasimhan, A. McGoron, A. Tashakkori. QBIC, an interdisciplinary and quantitative biological sciences curriculum: concept to implementation. Journal of Education Science. 12(1):11-14, 2011.
2. McGoron, A.J. and R.T Schoephoerster. Defining Quantifiable Primary Verification Metrics of Program Outcomes in Biomedical Engineering at Florida International University. International Conference for Engineering Education (ICEE), San Juan, Puerto Rico; 2006; in: "*Proceedings of the ICEE 2006*", International Network for Engineering Education and Research, (2006), ISBN 1-58874-648-8; pages T1A-1-T1A-6.
3. Brown, M. McGoron, A.J., and R.T. Schoephoerster. Adapting courses in Physiology to Meet the Needs of Biomedical Engineering. Proceeding of the Biomedical Engineering Society. October 2005.
4. Schoephoerster, R.T. and A.J. MCGoron. The FIU BME Partnershop Program: An Integrated Educational Approach to Biomedical Innovation and Entrepreneurship. The Whitaker Foundation Biomedical Engineering Educational Summit. Lansdowne, VA. March 3-6, 2005.
5. Byrne, J., A.J. McGoron, and R.T. Schoephoerster. Development of an Undergraduate Biomedical Engineering Laboratory Curriculum and Facilities. Proceeding of the Biomedical Engineering Society. Nashville, TN. October 1-4, 2003.
6. McGoron, A.J. Clinical Rotatins for Biomedical Engineers: Introducing The End-User of Medical Products Development. The Whitaker Foundation Biomedical Engineering Educational Summit. Lansdowne, VA. December 7-10, 2000.

**Research Grants/Contracts**

# a. Grant Proposals Pending

(McGoron, PI, 12%) 7/01/2011-6/30/2013

Source: National Institute of Health (R21-EBRG) $390,000

1 R21 CA159073-01A1

Title: Imaging for Y-90 Microsphere SIRT Planning

The goal of this study is to develop PET and SPECT imaging agents that more closely resemble microspheres used in Y-90 Selective Internal Radiation Therapy (SIRT). The agents are polymer microspheres with controlled biodegradation labeled with Ga-68 or Tc-99m. Studies are conducted in cell culture and rats.

(Gulec)

Role (Co-I, 10%) 7/1/2011-6/30\2013

Source: National Institutes of Health (R15) $397,300

Title: Ga-68 MAA PET/CT imaging for evaluation of patients treated with Y-90 SIRT

This is a clinical study to evaluate Ga-68 Macroaggregated Albumin (MAA) for Y-90 microsphere therapy planning in liver cancer patients.

## b. Active Funded Research

(McGoron) 10/2010-9/2013

Source: NSF (via subcontract from the University of Miami, PI W Zhao) $90,000

DUE1022750

Title: Collaborative Development and Application of Distributable, Internet Accessible, Interactive Medical Imaging Teaching Software and Dynamic Tracking System

The goal of this grant is to develop web-based educations software for teaching medical imaging. My role is developing and evaluating modules for Nuclear Medicine imaging.

(Simpson)

Role (Co-PI, 20%) 9/2010-8/2012

Source: US Army Medical Research Acquisition Activity $1,400,000 (BME portion - $777,600)

W81XWH-10-0732

Title: Mass Scale Biosensor Threat Diagnostic for In-Theater Defense Utilization

The goal of this multidisciplinary grant is to develop and validate sensor technology to detect the biological response to biological or chemical toxins to predict their effect on military personnel in the field. My role is PI for developing optical SERS based sensors.

(Weeks) 7/1/2008-6/30/2012

Role (Faculty, 4%) $1,250,000

1 T36 GM078004-01/M2OTAT

Source: NIH/NIGMS

Title: MARC Curricular Improvement Implementation-Phase II (Quantifying Biology in the Classroom)

(Munroe) 7/1/2008 - 6/30/2012

Role (Co-PI, 10%) $75,000/year

1SC3GM084816-01

Source: NIH

Title: Enhanced Biocompatibility of NiTi via Surface Treatment and Alloying

(Gulec) 1/12/2009 – 1/11/2011

Role (Collaborator, 1%) $250,000

Source: Rinker Family Foundation

Title: Liver Cancer Research

# c. Completed During FIU Appointment

McGoron (PI, 20%) 7/1/2008-9/30/2009

08BB-11 $200,000

Source: Florida Department of Health

Title: Image Guided Intervention for Breast Cancer: Combined Hyperthermia and Chemotherapy with Reduced Cardiotoxicity

McGoron (PI, 0%) 2/2009-1/2010

Source: NSF $10,000

Title: 25th Southern Biomedical Engineering Conference

McGoron (PI, 16%) 4/2006-3/2009

R15 AREA: [1R15CA118284-01](https://commons.era.nih.gov/commons/genericStatus.do?actionRole=nonPI&applID=7012359&uhf-token=VGi2nrpIGJr32zyXDQ%2FQi1yPTnE%3D) $150,000

Source: National Institutes of Health

Title: Respiratory Motion Compensation in PET Molecular Imaging

McGoron (PI, 8%) 7/2006-6/2007

Source: Florida Department of Health (SBTR) 065B-02 $95,000

Title: A micro-fabricated in vivo bubble oxygenator for the treatment of induced severe pulmonary disease

Collaborative project with Oxylation, LLC

McGoron (PI) 8/1/2006-8/1/2008

Source: HeartWare Inc $104,500

Title: Hemocompatibility Testing of Polymers for the Driveline of the HeartWare Next Generation LVAD

This study is to conduct *in vivo* materials compatibility testing in rabbits.

### McGoron (PI) 7/01/2007-6/30/2008

Source: Innovia, Inc $15,000

Title: Biocompatibility Evaluation of Composite Polymeric Materials

### This study is to conduct *in vivo* materials compatibility testing in rats

McGoron (PI, 13%) 7/2007-6/2008

Source: FIU Foundation – Faculty Research Award $23,000

Title: Image Guided Targeted Therapeutics for Cancer: Experimental Protocol Development

McGoron (PI, 0%) 8/2007-7/2008

Source: Lary Foundation $10,000

Title: Development of a bubble oxygenator

### Lin (PI) 7/2006-6/2008

Role (Co-I, 3%) $260,000

Source: American Heart Association

### In vivo Differentiation of Normal Stunned, Hibernating, and Scarred Myocardium using Optical Spectroscopy.

Jones (PI) 3/2005-2/2007

Role: (Co-I, 8%) $3,000,000

Source: Air Force Office of Scientific Research

Title: Research in Nanoelectronics and Bio-Nano Sensors

Crumpler (PI) 06/2007-01/2008

Role (Co-I, 5%) $109,400

Source: Nanomaterials Co.

Title: Nanoparticles to Detect and Neutralize Biological Agents

McGoron (PI, 0%) 8/2006-7/2007

Source: Lary Foundation $10,000

Title: Development of a bubble oxygenator

McGoron (PI, 20%) 7/2001-6/2005

Independent Investigator Award $225,000

Source: American Heart Association

Title: Cerebral Perfusion and Quantitative Glucose Metabolism Imaging in a Piglet Model of Pediatric Brain Injury using Hybrid SPECT/PET

Weeks (PI) 6/2004-5/2005

Role: (Co-I, 5%) $49,300

Source: NIH

Title: Quantifying Biology in the Classroom (The Q’BIC Plan)

Jain, Sandhya (PI), Nanomat, Inc. 8/2004-7/2006

FIU portion (Crumpler, PI) $340,000

Role: Co-I (8%)

Source: DOD Army SBIR/STTR Biotechnology Program Phase II

Title: Nanocapusle Coatings Utilizing Biomolecules to Detect Nano MgO-Cl2 Adduct to Neutralize the Biological Agents

Jain, Sandhya (PI), Nanomat, Inc.

FIU portion (Crumpler, PI) 10/2003 – 5/2004

Role: Co-I (5%) $50,000

Source: DOD Army SBIR/STTR Biotechnology Program

Title: Nanocapusle Coatings Utilizing Biomolecules to Detect Nano MgO-Cl2 Adduct to Neutralize the Biological Agents

Crumpler (PI) 2/2004 – 1/2005

Role: Co-I (5%) $100,000

Source: FIU Foundation (CTIP, Phase II) and Bioheart, Inc.

Title: Development and Implementation of Matrix System Technologies (MSTs) for Cardio Regeneration

Anit Giri, (PI), Nanomat, Inc 7/2002-6/2003

FIU Portion (McGoron, PI, 10%) $50,000

Source: NSF STTR Phase I

Title: Coupled Labeling for Cancer Diagnosis and Therapy

McGoron (PI, 5%) 1/2003-12/2003

Source: FIU Collaborative Technology Innovation Program (CTIP) $10,000

Title: *In Vitro* Blood Brain Barrier Model for Analysis of Anti-Epilepsy Drugs

McGoron (PI, 5%) 3/2002-7/2002

Source: Summer 2002 Provosts Mini-Research Competition $5,000

Title: Heat Generating Photosensors

McGoron (PI, 5%) 1/2002-12/2002

Source: FIU Biomedical Partnership Research Initiation Program $10,000

Title: In Vivo Monitoring of Myocardial Retention of Skeletal Myoblasts

Franquiz (PI) 1/2002-12/2002

Role: CO-I (5%) $10,000

Source: FIU Biomedical Partnership Research Initiation Program

Title: Three-dimensional Probabilistic Integration of Neuroimaging Modalities for Identification and

Surgery of the Seizure Focus.

Crumpler (PI) 1/2002-12/2002

Role: CO-I (5%) $10,000

Source: FIU Biomedical Partnership Research Initiation Program

Title: Myoblast Localization via Hydrogel Encapsulation/Delivery

Crumpler (PI) 1/2002-12/2002

Role: CO-I (5%) $10,000

Source: Bioheart Inc.

Title: Myoblast Localization via Hydrogel Encapsulation/Delivery

McGoron (PI, 5%) 6/2000-1/2001

Source: SMLX Technologies, Inc. $44,500

Title: Feasibility Study to Measure Antibody/Antigen Concentration by Electrical Methods

McGoron (PI, 25%) 4/2000-6/2000

Source: FIU Provost’s Office Summer Research Competition $12,900

Title: Microelectrode sensors for detection of anti-cancer drugs

Scheophoerster (PI) 1/2000-12/2000

Role: CO-I (5%) $44,000

Source: Bioheart, Inc

Title: Evaluation of Technology and Design Considerations for a Myocardial Implant and Its Delivery System

McGoron (PI) 12/2001-06/2002

Society of Nuclear Medicine $5,000

18-FDG Kinetics in Traumatic Brain Injury Using Hybrid SPECT/PET Coincidence Imaging.

**d. Completed During Previous Appointment**

**(required to maintain at least 80% of salary through extramural support)**

Franco (PI) 11/1997-11/1999

Role: CO-I (50%) $180,000

Source: EntreMed, Inc.

Title: Incorporation of IHP into Red Blood Cells by Electroporation

McGoron (PI, 5%) 2/1998-12/1998

Title: Transport Kinetics of 99mTc-labeled Tumor Imaging Agents $8,000

Source: Department of Radiology (UC) Seed Grant

McGoron (PI, 20%) 7/1997-6/1998

Source: Mallinckrodt Medical, Inc $99,800

Title: Development of Second Generation Perfusion Agents Which More Closely Resemble 201Thalium.

Biniakiewicz (PI) 7/1997-6/1998

Role: Co-I (10%) $75,800

Source: Mallinckrodt Medical, Inc.

Title: Development of a Metabolic Heart Imaging Agent Based on Q Chemistry

Thomas (PI) 7/1996-6/1998

Role: CO-I (30%) $130,000

Source: Mallinckrodt Medical, Inc.

Title: Radiation Dosimetry of Intracoronary Radiation Therapy

McGoron (PI, 23%) 7/1996-6/1997

Source: Mallinckrodt Medical, Inc $49,900

Title: Assessment of Myocardial Uptake of New Tc-99m Q Complexes

Service

**a. Professional Service**

* National President – Alpha Eta Mu Beta Biomedical Engineering Honor Society 2010-present
* Member American Institute of Medical and Biological Eng. (AIMBE) Academic Council 2007-2010
* Organizing committee for the BME Council of Chairs Educational Workshop at the BMES Conference in Austin TX. October 6, 2010.
* Judge. Miami Dade STEM Expo’s S. Florida Regional Science and Engineering Fair 2011.
* Session Chair: 26th Southern Biomedical Engineering Conference. College Park, MD, 2010
* Editorial Board Am J BioMedical Sciences
* DOD [Congressionally Directed Medical Research Programs](https://cdmrp.org/) Grant Review Committee 2010
* Ad hoc reviewer for the 2010 Multidisciplinary Research Grant (MRG) Program: North Carolina Biotechnology Center
* Organizing Committee Chair, 25th Southern Biomedical Engineering Conference. Miami, FL, 2009
* U. Arkansas Biological and Agricultural University MSBME Academic Advisory Board 2009-
* Guest editor of special Biomedical Engineering issue of American J of Biomedical Sciences.
* Session Chair. 24th Southern Biomedical Engineering Conference. El Paso, TX, 2008
* American Heart Association Grant Peer Review Committee 2002-2004 and 2007
* Statewide Course Numbering System Committee Advisor
* Reviewer for International Network for Engineering Education and Research (“iNEER) 2006
* American Heart Association Miami Community Board, 2004-2005
* Steering Committee for BioTech 2004 meeting
* Technical Committee – Engineering World Health 2004
* Reviewer. Kentucky Science and Engineering Foundation. R&D Excellence Program 2004-2007
* Session Co-Chair, American’s Nuclear Energy Symposium (ANES), Miami Beach, FL, October 4-6, 2004: Isotopes in Medicine
* Session Co-Chair: 21st Southern Biomedical Engineering Conference, Washington, DC, September 28 – 29, 2002.
* Lectured to Nuclear Medicine Medical Residents at the University of Miami School of Medicine
* Reviewer for FASEB, J. Biomedical Devices, IEEE Trans Medical Imaging, Annals of BME, Int J Pharmaceutics, Comp Med and Biol., Nanomedicine, Molecular Pharmaceutics.

**b. University Service**

 **(1) to the Department**

* Undergraduate Program Director for Biomedical Engineering 2003-present
* Chair Tenure and Promotion committee 2006-2007
* Major contributor for preparation of successful ABET submission in 2005 and 2008
* Faculty Advisor to BMES Student chapter since 2002-2007
* Faculty Advisor to Alpha Eta Mu Beta Biomedical Engineering Honor Society since 2007
* Recruiting at Miami Dade College in 2005 and 2006
* MBRS RISE and MARC U\*STAR Mentor 2001-present
* Chair Search and Screen Committees 2000, 2002, 2004, 2005
* Search and Screen Committee member 2008 and 2010
* Curriculum committee to develop BS program in Biomedical Engineering 2001-2002
* Curriculum committee for Mechanical Engineering 2001-2003
* United Way Ambassador 2000

 **(2) to the School/College**

* Chair Search and Screen Committee for SCIS Director
* CEC Curriculum Committee 2010-2011
* Invited talk at the University of Puerto Rico at Mayaguez July 2006.
* COE Faculty Council on Governance 2003-2005
* Introduction to the Profession Committee (IPC) 2004-2008
* Trends in Engineering Technologies and Education Workshop, 2004 and 2006
* Tenure and Promotion Committee 2005-2007

 **(3) to the University**

* Core Facilities & Recharge Centers Advisory Committee. 2010-present
* Radiation Safety Committee 2000-present
* Animal Care and Use Committee (IACUC) 2002-2009
* Undergraduate Medical Education and Support Services Committee 2005-2007
* Participating in the Q’BIC (Quantitative Biology in the Classroom) program originally funded by the Provost and later by a NIH grant.
* Serve on PhD committees in Engineering, Computer Science. Chemistry, and Biological Sciences

**Professional Development**

* Workshop to Enhance Proposal Development Skills and Promote Research Collaborations. NSF, Arlington, VA. February 23-24, 2010.
* BME-IDEA Workshop on Innovation, Design and Entrepreneurship. Pittsburg, PA. October 7, 2009 and Los Angeles, CA September 26, 2007.
* Attended the 3rd Biomedical Engineering Education Summit Meeting. St Charles, IL. 2008
* Attended workshop on Disease Models for Drug Discovery in Philadelphia, PA, 2006
* Attended and presented a paper to the International Conference on Engineering Education in San Juan, Puerto Rico, 2006
* Whitaker Foundation Biomedical Engineering Educational Summit. Washington, DC, 2000 and 2005
* ABET Workshop at the Biomedical Engineering Society meeting. Philadelphia, PA, 2004
* Kinetics Transport Modeling Workshop. National Simulation Resource, University of Washington, 1996
* Creating a Successful Biomedical Company: Short Course, May 10-27, 1993, U. of Cincinnati.

## Professional Honors, Prizes and Fellowships

* Outstanding Faculty Mentor Award at the 2010 National Alpha Eta Mu Beta (AEMB) Biomedical Engineering Honor Society meeting.
* Elected National President AEMB. 2010-present
* Member - Biomedical Engineering Society
* Member - Sigma Xi Scientific Research Society
* AEMB Alumni Member
* FIU Operational Excellence Award 2009
* FIU Faculty Research Award 2007
* American Heart Association Initial Investigator Award 2001-2004
* FIU Provost’s Office Summer Research Competition 2000 and 2002
* Louisiana Board of Regents Graduate Fellow, 1988-1991
* Outstanding Biomedical Engineering Student Award, 1986
* Tau Beta Omega Engineering Honor Society (later Tau Beta Pi)
* PhD GPA 4.0/4.0 - MSE GPA 3.6/4.0 - BSE. with High Honors (GPA 3.7/4.0)

**Graduate Student Development Activities**

**a. PhD Student Major Advisor**

**Graduated or have passed into PhD Candidacy:**

1. Jiali Wang, PhD, 2005-2009. Motion Correction Algorithm of Lung Tumors for Respiratory Gated PET Images (supported by AHA)
2. Yuan Tang, PhD, 2005-2010. Image Guided Targeted Therapeutics for Cancer: Combined Hyperthermia and Chemotherapy. (Supported by FLDOH)
3. Alicia Fernandez, PhD, 2006-present. Design and Synthesis of anthracycline-peptide-conjugates targeted to nuclear DNA with less cardiotoxicity. (MBRS RISE fellowship)
4. Ruchir Bhatt, 2007-present. A novel algorithm for PET tumor volume and activity quantification: Without specifying camera’s point spread function (PSF). (supported by NSF)

**PhD students not yet passed into Candidacy**

1. Tingjun Lei
2. Surpiya Srinivasan
3. Abhignyan Nagesetti
4. Vinay Bhardwaj
5. Alejandro Amor
6. Dharam Persaud

**b. MS Student Major Advisor (only including students that have already graduated):**

1. Xuming Mao, MS (Thesis), 1999-2001. Interpolation Methods for Dynamic Imaging and Tracer Kinetic Modeling for Emission Tomography using Rotating Detectors.
2. Min Zhou, MS (Thesis), 2000-2002. Image Processing and Tracer Kinetics Modeling for The Rotating PET Study of Cerebral Glucose Metabolism
3. Danny Gonzalez, MS (Thesis), 2002-2004. Creation of a Novel Magnetic Drug Delivery Complex.
4. Michael Capille, MS (Thesis), 2003-2005. SPECT CBF Validation using Radioactive Microspsheres.
5. Jiali Wang, MS (Thesis), 2004-2005. Respiratory Gated PET for Lung Cancer Imaging. Device Development
6. Kealoha Young, MS (project), 2005-2006. A micro-fabricated in vivo bubble oxygenator for the treatment of induced severe pulmonary disease.
7. Raquibul Chowdhury, MS (Thesis), 2005-2007. Image Guided Targeted Therapeutics for Cancer: Combined Hyperthermia and Chemotherapy.
8. Mohammed Goryawala, MS (Thesis), 2006-2007. Respiratory Gated PET for Lung Cancer Imaging.
9. Laura Causey, MS (Thesis), 2006-2008. A micro-fabricated in vivo bubble oxygenator for the treatment of induced severe pulmonary disease.
10. Misael de Valle, MS (project), 2007-2008. Respiratory Gated PET Lung Phantom for Lung Cancer Imaging.
11. Karin Hsiao, MS (project), 2007-2008. Implant Retrieval Database Analysis.
12. Rupak Dua, MS (Project), 2007-2008. To evaluate the use of electrical cell substrate impedance scanning system for investigating the cytotoxic effect of doxorubicin on ovarian cancerous cells
13. Abhignyan Nagesetti. MS (Project), 2007-2008. Design Strategy to Formulate Biodegradable Nanoparticles to entrap Fluorescent Drugs
14. Chetan Potdar. MS (project). 2007-2009. Spectrofluorometer based Optical Imaging System for fluorescence imaging of Molecular Fluorophores sodium fluorescein and Texas-Red conjugate dextran
15. Segar Shah. MS (project) 2007-2009. To test the biocompatibility of Nitinol using endothelial cells and to investigate its cytotoxic effects
16. Surpiya Srinivasan. MS (project). 2007-2009. Preparation and characterization of doxorubicin loaded PLGA nanoparticles decorated with monoclonal antibodies for targeted chemotherapy of ovarian cancer.
17. Syed Kazmi. MS (project). 2007-2009. CCD camera imaging setup and in vivo hyperthermia
18. Duriem Calderin, MS (Thesis), 2008-2010. Modeling of Loose Contamination Scenarios to Predict the Amount of Contamination Removed.
19. Dharam Persaud, MS (Project). 2009-2010. Nitinol Biomaterials: Topographical Analysis using Atomic Force Microscopy.
20. Denny Carvajal, MS. 2010-present.

**c. Dissertation/Thesis Committees:**

PhD (Graduated or have passed into PhD Candidacy)

1. William Kassing (1998-2001). Department of Mechanical, Industrial and Nuclear Engineering, University of Cincinnati. A Monte Carlo Investigation of the Radiation Dose distribution in Intravascular Brachytherapy.
2. David Holtzclaw (1998-2001). Department of Aerospace Eng and Eng Mechanics, University of Cincinnati. Characterization of Light Sickle Erythrocytes Derived from Dense Erythrocytes In vitro.
3. Zhizhong Wang (2004-2005). Chemistry, An Improved Synthetic Route to Tryprostatins and their Applications in Natural Product Synthesis.
4. Jose Iragorry (2004-2005). Mechanical Engineering. Development in Frost Measurement Techniques and Mathematical Models.
5. N. Andres Parra (2005-2009) Computer Science, Rigid and Non-Rigid-Based Medical Image Registration
6. Liza Merly (2005-present) Biological Sciences, In Vitro Study of the Effects of Shark Cartilage on Communication Between Immune Cells and Gut–Derived Epithelial Cells.
7. Lucy Yehiayan (2006-present) Chemistry, The Interactions of Different Arsenic Species with Tilos: Chemical and Biological Implications.
8. Xi Chen (2006-2010) Chem/Biochem. Synthesis and Characterization of Photochromic Indolyl Substituted Fulgides and Fulgimides.
9. Siobhain Gallocher (2006-2007). BME. Polymer Leaflet Artificial Heart Valves
10. Qiang Wang (2007-2008). BME. Biocompatibility evaluación of composite polymeric materials and preclinical test of a novel artificial heart valve.
11. Ronald Gutierrez (2007-2010). BME. Computational modeling of a tissue engineered heart valve.
12. Waseem Haider (2007-2010). MME. Enhanced biocompatibility of NiTi (Nitinol) via surface treatment and alloying.
13. Yalin Ti. (2009-2010). BME. In-vivo characterization of myocardial infarction using fluorescence and diffuse reflectance spectroscopy.
14. Jesse Pulido (2010-present). Chem/Biochem. Synthesis of 4-Amino Modified Arabino-Cytinide and Gemcitabine Analogues for PET-based Imaging.
15. Puneet Gill (2011-present). MME. Assessment of Biodegradable Magnesium Alloys for Enhanced Mechanical and Biocompatible Properties
16. Shradha Prabhulkar (2010-present). BME. Development of micro immunosensors to study genomic and proteomic biomarkers related to cancer and Alzheimer’s disease.
17. Po-Ching Chen (2009-2011). BME
18. Shadab Saddiqui. (2010-present). MME.

MS (Only including those that have already graduated)

1. Yanran Liu (2002). BME, A Three-Dimensional Model of a Polymer Composite Trileaflet Aortic Valve Using Finite Element Analysis
2. Alejandra Caceras (2003). BME, A Dosimetry and Radiobiological Model for Intravascular Brachytherapy Treatment Planning with Radioisotope Emitting Stents.
3. Madhu Durai (2003). BME, Statistical Characterization of Positron Emission Tomography Standardized Uptake Values in Simulated Malignant Tumors.
4. Martha Vallejo (2004). BME, Development and Implementation of Biodegradable Matrix for Cardio Regeneration
5. Brijesh Kadam (2004). BME, Site-specific Delivery of Growth Factors Using Polymer Nanoparticles
6. Fernando Jaramillo (2005). BME, Catheter Based Heart Valves.
7. Manu Kumar (2005). BME, In Vitro Study and Quantification of Nitric Oxide and Calcium Interactions in Micro vessels obtained from Rat Mesentery using Fluorescent Microscopy.
8. Qiang Wang (2006). BME, Catheter Based Heart Valves, In Vivo and In Vitro Evaluation
9. Ange Marie Patricia Fièvre (2006), Electrical and Computer Eng, Nanoscale Optical Waveguides.
10. David Saez (2006). BME, MCNP5 Monte Carlo Calculation of Radial Dose Distributions ion Water from Isotropic Sources of Beta Emitters used in Radionuclide Therapy.
11. Alex Pena (2006). BME, Posture-Sensing Back Belt for the Encouragement of Proper Lifting Techniques.
12. Juan Pizarro (2006). BME, Nitric Oxide Supplying Dendrimers Characterization and Detection of Release
13. Rafael Oliver (2006). BME, In vivo Differentiation of Normal Stunned, Hibernating, and Scarred Myocardium using Optical Spectroscopy.
14. Zhicong Huang (2007). BME. Design and Development of a Testing Mechanisms for QA in Cyberknife
15. Michael Becker (2008). BME. Liposome Processing Optimization.
16. Soliany Pardo Ruiz (2008). BME. Development and Characterization of a Human Lung Tissue Co-Culture System using a Bioadhesive Hydrogel Matrix.
17. Erika McKinney (2008). BME. COMSOL Multi-physics Used to Model Mercury Hydrology Contamination in Soil and Blood Flow-Through a Partially Occluded Vessels
18. Parikshat Sirpal (2008). BME. Experimental Characterization of Near-Infrared Laser Energy Absorption, Scattering, and Transmittance in Biological Tissue.
19. Viviana Monroy (2008-present). BME. Development of Yttria Stabilized Zirconia - MWNT Nanocomposite with Enhanced Fracture Toughness for Coatings of Titanium Hip-Head Ball.
20. Thomas Claiborne (2008). BME. Development and Evaluation of a Catheter Deliverable Artificial Aortic Heart Valve Prosthesis and Delivery system.
21. Avani Mulchandani (2008), BME. Nanomaterials functionalized device for redox studies of cytochrome P450cam L246K
22. Bradley Fernald (2008), BME. Diffuse reflectance spectroscopy in biomedicine.
23. Amardeep Mann (2008). BME. Exercise Evaluation from Photoplethysmographic Blood Volume Pulse Signals Analyzed by Parametric Auto-Regressive Modeling
24. Chandan Pulletikurthi (2009). MME. Enhancement of Biocompatibility of Porous Nitinol.
25. Dharam Persaud (2010). BME. Nitinol Biomaterials: Topographical Analysis using Atomic Force Microscopy.

**Course, Curriculum Development Activities**

* BME Council of Chairs Educational Workshop at the BMES Conference in Austin TX. October 6, 2010.
* Participating in the Q’BIC (Quantitative Biology in the Classroom) program funded by the NIH
* Attended the BMES Biomedical Engineering Educational Summit. St Charles, IL, 2008.
* Working with TERRA Environmental Research Institute Magnet High School in Miami to develop a laboratory curriculum for their sophomore and junior biomedical students.
* Attended and presented a paper to the International Conference on Engineering Education in San Juan, Puerto Rico, July, 2006
* Served on the committee to develop the BS Biomedical Engineering curriculum.
* Serve as the Undergraduate Program Director for Biomedical Engineering and had a major role in the successful ABET accreditation 2005 and 2008.
* Designed and implemented two undergraduate student laboratory courses in which students learn to execute and analyze research level experiments. Worked closely with the laboratory instructor and other faculty in the Department to design 5 laboratory exercises for each course. The exercises incorporate current faculty research and utilize state-of-the-art research equipment.
* Developed a Minor in Biomedical Engineering for Non-Engineering Majors.
* Developed the Honors Curriculum for Biomedical Engineering.
* Attended the 2005 Whitaker Foundation Biomedical Engineering Educational Summit. Washington, DC
* Attended the ABET Workshop at the Biomedical Engineering Society meeting. Philadelphia, PA, 2004
* Attended the 2000 Whitaker Foundation Biomedical Engineering Educational Summit. Washington, DC to present our Clinical Rotations for Biomedical Engineers course.
* To expose the students to “real world” bioengineering, I invited speakers from our Biomedical Engineering Industry Partners to speak to the students in the EGM 4580 class and the entire college to these lectures. I also coordinated visits by the EGM 4580 students to biotechnology companies.

The following two undergraduate laboratory courses were designed and developed, but are coordinated by a full time laboratory instructor

* BME 4050L: Biomedical Engineering Lab I
* BME 4051L: Biomedical Engineering Lab II

The following courses were developed and taught:

* BME 2740: BME Modeling and Simulation
* Modeling and Simulation Summer Workshop for the Q’BIC program
* BME 3032: BME Transport
* BME 4005: Principles of Bioengineering
* BME 4011: Clinical Rotations for Biomedical Engineers
* BME 5005: Applied Biomedical Engineering Principles
* **BME 6532: Molecular Imaging**
* **BME 6750: Artificial Organs**

The following courses were developed and initially team-taught:

* BME 3700: Engineering Analysis of Biological Systems I
* BME 3701: Engineering Analysis of Biological Systems II

Other Teaching Related Activities

**a. Post Graduates/Fellows**

1. Romila Manchanda, PhD, BME Young Inventor Awardee, FIU, 2007-2010
2. Anil Kumar, M.D., Cardiology Fellow, University of Cincinnati, 1997-1998
3. Abbe Rosenbaum, M.D., Cardiology Fellow, University of Cincinnati, 1996-1997
4. Michael Meleca, M.D., Cardiology Fellow, University of Cincinnati, 1995-1996
5. Daniel Lenihan, M.D., Cardiology Fellow, University of Cincinnati, 1994-1995
6. Joseph Olonzo, M.D., Internal Medicine Resident, University of Cincinnati, 1994

b. Undergraduate Students Mentored at FIU

1. Anisley Valenciaga (Honors Scholar) 2010-
2. Annie Nunez (volunteer), 2009
3. Manuel Romero (Supported by MBRS RISE), 2008-2010
4. Vanessa A. Scagliati (Supported by MBRS RISE), 2008-2009
5. Andres Ramos (Honors Scholar) 2008-2009
6. Denny Carvajal (Supported by the Norman Weldon Summer Research Internship), 2007-2008
7. Kevin Li (Honors College Student), 2008
8. Jose Matteo (Supported by NIH R15 grant), 2007-2008
9. Mohammed Khan (Summer Intern volunteer from U Penn), 2007
10. Rosa Ramirez (Supported by MBRS RISE), 2007-2008
11. Jose Villar (Supported by MBRS RISE), 2007-2008
12. Cristina Rodriguez (Supported by FLDOH and Oxylation, LLC), 2007
13. Sean Chislett (Supported by the Norman Weldon Summer Research Internship), 2007
14. Genevieve Knowles (Supported by NIH Grant, MBRS RISE Fellowship), 2007
15. Barbara Traub (Supported by NIH Grant), 2007
16. Jennifer Soto (Supported by NIH Grant), 2006
17. Anat Aviram (Supported by MBRS RISE fellowship), 2005-2007
18. Sandy Emile (Supported by the Norman Weldon Summer Research Internship), 2005
19. Sarah Lowe (Honors College Student), 2005
20. Adrian Romero (Supported by a Ronald E. McNair Research Fellowship), 2004-2006
21. Alicia Fernandez (Supported by CTIP), 2004
22. Delhy Arias (Supported by MBRS MARC fellowship), 2003-2005
23. Mahwish Ahmed (Supported by CTIP), 2003-2004
24. Karym Urdaneta (Supported by CTIP), 2003
25. Jackeline Martinez, 2002-2003
26. Juan Marquez, 2003
27. Yenny Vargas (Supported by MBRS MARC fellowship), 2001-2002
28. Joseph Manguno(Supported by SMLX grant), 2000-2001
29. Danny Acero (Supported by SMLX Grant), 2000-2001
30. Luis Ruiz, 2000

**c. Senior Design Project Mentoring**

1. Image Guided Therapy - Nanoparticle drugs. Spring 2006
2. Langendorff Fraction Collector. Summer 2006
3. Supporting Catheter for Oxygenation System. Spring 2007
4. Development of a shape memory polymer material suitable for an artificial AAA stent graft. Summer 2007
5. PET/CT Dynamic Respiratory Phantom Prototype. Spring 2008
6. StarCath. To Facilitate Oxygen Delivery into the Vena Cava. Spring 2008
7. Image Guided Therapy: Combined Imaging and Hyperthermia. Summer 2008.
8. *Xetris*: The Un-Clumped Radiated Microsphere, Spring 2009

d. High School Students Mentored at FIU

1. Jorge Perdomo, 2010 (TERRA Biomedical Research Institute)
2. Brenda Abreu, 2010 (from TERRA Biomedical Research Institute)
3. Rebecca Lebwohl, 2009
4. Aaron Enten, 2009
5. Brandon Wood, 2008 and 2010
6. Alisa Tao, 2004
7. Deniz Yavas, 2002-2003

**e. Undergraduate Students Mentored at Previous Academic Appointment**

1. Ashfaque Karim, American Heart Association Summer Research Fellow, 1998
2. Nicole Faust, ASPET Summer Research Training Program, 1998
3. Ursula Ekpenyong, NIH Summer Research Fellow, 1996
4. Geneeco Hudson, NIH Summer Research Fellow, 1995, 1996
5. Katie Peeden, American Heart Association Summer Research Fellow, 1995
6. Darnell Hackworth, NIH Summer Research Fellow, 1994
7. Stephanie Buening, American Heart Association Summer Research Fellow, 1993