

Professor Frank A. Gomez **Curriculum Vitae**

California State University, Los Angeles
Department of Chemistry and Biochemistry
5151 State University Drive
Los Angeles, California 90032-8202
323-343-2368
Fax: 323-343-6490
E-mail: fgomez2@calstatela.edu
Website: <http://www.calstatela.edu/dept/chem/gomez/index.htm>

Educational Training

1986	B.S.	Chemistry	California State University, Los Angeles (with T. P. Onak)
1991	Ph.D.	Chemistry	University of California, Los Angeles (with M. F. Hawthorne)
1991-94	Postdoc	Chemistry	Harvard University - Damon Runyon-Walter Winchell Cancer Research Fund Postdoctoral Fellow (with G. M. Whitesides)

Professional Experience

2009-current	Co-PI, CREST Center for Energy and Sustainability
2004-2011	Director, CSULA-Caltech Partnership for Research and Education in Materials (PREM) Collaborative
2003-2010	Visiting Research Associate, Caltech
2002-present	Professor, California State University, Los Angeles
1997-2002	Associate Professor, California State University, Los Angeles
1994-1997	Assistant Professor, California State University, Los Angeles

Awards

CSUPERB Biotechnology Faculty Research Award, January, 2007.
SACNAS Undergraduate Institution Mentor Award, 2003.
California Educator of the Year, CA Junior Chamber of Commerce (Jaycees), November, 1998.
Hispanic Engineer National Achievement Award Conference (HENAAC), Most Aspiring Scientist, 1993.
MARC-NIH Predoctoral Fellowship, 1986-1991.
National Chicano Council for Higher Education Doctoral Fellowship (NCCHE), 1984
MARC-NIH Undergraduate Fellowship, 1984-1986.

Professional Service

Editorial Board, *Journal of Nanomedicine and Biotherapeutic Discovery*, 2013-present.
Guest Editor: Special issue of *Bioanalysis* on Bioanalytical Applications in Microfluidics, 2010.
Editorial Board, *Bioanalysis*, 2008-present.
Executive Board, UCLA NSF-IGERT, 2007-2012.
Executive Committee, Southern California Section of the American Chemical Society, 1998-2000.
Councilor, SCALACS, 2007-2009.
American Chemical Society Minority Affairs Committee, Associate Member, 1996-1998.
American Chemical Society Task Force on Teacher Professional Development, 1996.
Appointed representative to the Section Committee of the American Association for the Advancement of Science (AAAS) Section on Education, 1996-1997; 2001-2002.
American Chemical Society Committee on Education, Associate Member, 1995-1997.

Reviewer

Ad hoc NIH Enabling Bioanalytical & Biophysical Technologies (EBT) Study Section, January, 2009.
NSF-NSEC Site Visit, University of Wisconsin, Madison, April, 2008.
Reviewer of proposals for the North Carolina Biotechnology Center, 2008.

NSF-MRSEC Site Visit, Harvard University, October, 2006.
 Review Committee, Chair, Richard C. Tolman Award, April, 1999.
 Review Panel for the NSF Inorganic Chemistry CAREER Award, November, 1998.
 Review Panel for the NSF Postdoctoral Fellowships in Science, Mathematics, Engineering and Technology Education (PFSMETE) Program, April, 1998.
Ad hoc NIH-MBRS reviewer of proposals, February, 1998.
Ad hoc reviewer of proposals for the National Research Council, Ford Foundation, March, 1997.
 Committee of Visitors Review Panel for the National Science Foundation (NSF)-NATO Postdoctoral Fellowships in Science and Engineering Program, December, 1996.
 NSF Model Institutions of Excellence Site Review Committee, UTEP, October, 1996, April, 1997.
Ad hoc reviewer of manuscripts submitted for publication in: *Journal of Chromatography A*, *Journal of Chromatography B*, *Journal of the American Chemical Society*, *Inorganic Chemistry*, *Electrophoresis*, *The Analyst*, *Journal of Plant Physiology*, *Chemical Engineering Communications*, *Analytical and Bioanalytical Chemistry*, *Journal of Pharmaceutical Sciences*, *Applied Biochemistry and Biotechnology*, *Analytical Chemistry*, *Talanta*, *Journal of Separation Science*, *Sensors and Actuators B*, *Microfluidics and Nanofluidics*, *Biophysical Chemistry*, *Lab Chip*
 Reviewer of proposals, NSF, 1996-present.
Ad hoc reviewer of proposals, GTE FOCUS Program, Stamford, CT, December, 1994.

Community Service

City of Montebello, Councilmember, 2009-present; Mayor Pro Tem, 2010-2011; Mayor, 2011-2012.
 Alameda Corridor East (ACE) Construction Authority, 2010-2012.
 San Gabriel Valley Council of Governments, 2010-2012.
 Don Bosco Technical Institute Board of Trustees, 2007-present.
 Conference Program Chair, SACNAS National Conference, Portland, OR, October, 1999; Atlanta, GA, October, 2000.
 Executive Committee, Los Angeles County School Trustees Association (LACSTA), 1998-2000.
 Montebello Unified School District Board of Education, December, 1997-2001.
 The East Los Angeles Community Union (TELACU) Scholarship Committee, City of Commerce, CA, 1996, 2000.
 Board of Directors, Society for Advancement of Chicanos and Native Americans in Science (SACNAS), 1989-1991, 1993-1996, 1997-2003, Secretary 1997-2003.

Publications (Underlined names denote undergraduate student co-authors.)

1. "Synthetic and Rearrangement Studies on the Carboranes *B*-X-*closo*-2,4-C₂B₅H₆ (X=Br, I) and *B*,*B'*-X₂-*closo*-2,4-C₂B₅H₅. Correlation of *B*-Halo- and *B*,*B'*-Dihalodicarba-*closo*-heptaborane Isomer Stabilities," Ng, B.; Onak, T.; Gomez, F.; DiStefano, E. W. *Inorg. Chem.* **1985**, *24*, 4091-4096.
2. "Conversion of *closo*-2,4-C₂B₅H₇ to [*nido*-2,4-C₂B₅H₇]," Abdou, Z. J.; Gomez, F.; Abdou, G.; Onak, T. *Inorg. Chem.* **1988**, *27*, 3679-3680.
3. "The Latino Science Recruitment Project," Gomez, F. A. *J. Chem. Ed.* **1990**, *67*, 318-320.
4. "The Use of Mixed Halogens, ICl and IBr, and (C₂H₅)₂NSF₃ as Halogenating Agents for *Closo*-2,4-C₂B₅H₇ and Some Derivatives," Gomez, F. A.; Onak, T.; Arias, J.; Alfonso, C. *Main Group Metal Chemistry* **1990**, *13*(4), 237-246.
5. "A Versatile Protecting Group for 1,2-Dicarba-*closo*-dodecaborane(12) and the Structure of a Silylcarborane Derivative," Gomez, F. A.; Johnson, S. E.; Hawthorne, M. F. *J. Am. Chem. Soc.* **1991**, *113*, 5915-5917.
6. "A Simple Route to C-Monosubstituted Carborane Derivatives," Gomez, F. A.; Hawthorne, M. F. *J. Org. Chem.* **1992**, *57*, 1384-1390.
7. "Synthesis and Structural Characterization of Metallocarboranes Containing Bridged Dicarbolide Ligands," Gomez, F. A.; Johnson, S. E.; Knobler, C. B.; Hawthorne, M. F. *Inorg. Chem.* **1992**, *31*, 3558-3567.
8. "Synthesis and Structural Characterization of Pyrazole Bridged Metalla-*bis*(dicarbolide) Derivatives of Cobalt, Nickel, Copper, and Iron: Models for Venus Flytrap Cluster Reagents,"

- Varadarajan, A.; Johnson, S. E.; Gomez, F. A.; Chakrabarti, S.; Knobler, C. B.; Hawthorne, M. F. *J. Am. Chem. Soc.* **1992**, *114*, 9003-9011.
9. "Organofunctionalized Derivatives of *O*-Carborane as Precursors to Non-Oxide Ceramics of Boron," Johnson, S. E.; Gomez, F. A.; Hawthorne, M. F.; Thorne, K. J.; MacKenzie, J. D. *Eur. J. Solid State & Inorg. Chem.* **1992**, *29*, 113-125.
 10. "Carboracycles: A Family of Novel Macrocyclic Carborane Derivatives," Chizhevsky, I. T.; Johnson, S. E.; Knobler, C. B.; Gomez, F. A.; Hawthorne, M. F. *J. Am. Chem. Soc.* **1993**, *115*, 6981-6982.
 11. "Determination of Binding Constants of Ligands to Proteins by Affinity Capillary Electrophoresis: Compensation for Electroosmotic Flow," Gomez, F. A.; Avila, L. Z.; Chu, Y.-H.; Whitesides, G. M. *Anal. Chem.* **1994**, *66*, 1785-1791.
 12. "Affinity Capillary Electrophoresis: Insights into the Binding of SH3 Domains by Peptides Derived from an SH3-Binding Protein," Gomez, F. A.; Chen, J. K.; Tanaka, A.; Schreiber, S. L.; Whitesides, G. M. *J. Org. Chem.* **1994**, *59*, 2885-2886.
 13. "Determination of the Net Charge of Proteins Using Capillary Electrophoresis," Gao, J.; Gomez, F. A.; Haerter, R.; Whitesides, G. M. *Proc. Natl. Acad. Sci. U.S.A.*, **1994**, *91*, 12027-12030.
 14. "Using Capillary Electrophoresis to Follow the Acetylation of the Amino Groups of Insulin and to Estimate their Basicities," Gao, J.; Mrksich, M.; Gomez, F. A.; Whitesides, G. M. *Anal. Chem.* **1995**, *67*, 3093-3100.
 15. "Determination of the Binding of Ligands Containing the *N*-2,4-dinitrophenyl Group to Bivalent Monoclonal Rat anti-DNP Antibody Using Affinity Capillary Electrophoresis," Mammen, M.; Gomez, F. A.; Whitesides, G. M. *Anal. Chem.* **1995**, *67*, 3526-3535.
 16. "Multiple-Plug Binding Assays Using Affinity Capillary Electrophoresis," Gomez, F. A.; Mirkovich, J. N.; Dominguez, V. M.; Liu, K. W.; Macias, D. M. *J. Chromatogr. A*, **1996**, *727*, 291-299.
 17. "Carboracycles: Macrocyclic Compounds Composed of Carborane Icosahedra Linked by Organic Bridging Groups," Jiang, W.; Chizhevsky, I. T.; Mortimer, M. D.; Chen, W.; Knobler, C. B.; Johnson, S. E.; Gomez, F. A.; Hawthorne, M. F. *Inorg. Chem.* **1996**, *35*, 5417-5426.
 18. "Determination of the Binding of β -Cyclodextrin Derivatives to Adamantane Carboxylic Acids Using Capillary Electrophoresis," Kwak, E. -S.; Gomez, F. A. *Chromatographia* **1996**, *43*, 659-662.
 19. "Enzyme-Catalyzed Microreactions Using Capillary Electrophoresis: A Quantitative Study," Zhao, D. S.; Gomez, F. A. *Chromatographia* **1997**, *44*, 514-520.
 20. "Double Enzyme-Catalyzed Microreactors Using Capillary Electrophoresis," Zhao, D. S.; Gomez, F. A. *Electrophoresis* **1998**, *19*, 420-426.
 21. "The Use of Affinity Capillary Electrophoresis for Determining Binding Constants of Ligands to Receptors," Zhao, D. S.; Kwak, E. -S.; Kawaoka, J.; Esquivel, S.; Gomez, F. A. *Am. Lab.* **1998**, *30*, 40-47.
 22. "Use of Mobility Ratios to Estimate Binding Constants in Affinity Capillary Electrophoresis," Kawaoka, J.; Gomez, F. A. *J. Chromatogr. B*, **1998**, *715*, 203-210.
 23. "Use of a Partial-Filling Technique in Affinity Capillary Electrophoresis for Determining Binding Constants of Ligands to Receptors," Heintz, J.; Hernandez, M.; Gomez, F. A. *J. Chromatogr. A*, **1999**, *840*, 261-268.
 24. "Optimization of Capillary Electrophoresis Conditions for In-Capillary Enzyme-Catalyzed Microreactions," Kwak, E. -S.; Esquivel, S.; Gomez, F. A. *Anal. Chim. Acta*, **1999**, *397*, 183-190.
 25. "1-[Ferrocenyl(hydroxy)methyl]-1,2-dicarba-closo-dodecaborane," Crundwell, G.; Arellanes, C.; Gomez, F. A.; Kantardjieff, K. *Acta Crystallogr., Sect. C*, **1999**, *C55*, IUC9900087.
 26. "Flow-Through Partial-Filling Affinity Capillary Electrophoresis Can Estimate Binding Constants of Ligands to Receptors," Mito, E.; Gomez, F. A. *Chromatographia*, **1999**, *50*, 689-694.
 27. "Use of Capillary Electrophoresis and Indirect Detection to Quantitate In-Capillary Enzyme-Catalyzed Microreactions," Zhang, Y.; El-Maghrabi, R.; Gomez, F. A. *Analyst*, **2000**, *125*, 685-688.

28. "Estimation of Receptor-Ligand Interactions by the Use of a Two-Marker System in Affinity Capillary Electrophoresis," Mito, E.; Zhang, Y.; Esquivel, S.; Gomez, F. A. *Anal. Biochem.* **2000**, *280*, 209-215.
29. "On-Column Derivatization and Analysis of Amino Acids, Peptides, and Alkylamines by Anhydrides Using Capillary Electrophoresis," Zhang, Y.; Gomez, F. A. *Electrophoresis*, **2000**, *21*, 3305-3310.
30. "Multiple-Step Ligand Injection Affinity Capillary Electrophoresis for Determining Binding Constants of Ligands to Receptors," Zhang, Y.; Gomez, F. A. *J. Chromatogr. A*, **2000**, *897*, 339-347.
31. "On-Column Ligand Synthesis Coupled to Partial-Filling Affinity Capillary Electrophoresis to Estimate Binding Constants of Ligands to a Receptor," Zhang, Y.; Kodama, C.; Zurita, C.; Gomez, F. A. *J. Chromatogr. A*, **2001**, *928*, 233-241.
32. "On-Column Enzyme-Catalyzed Microreactions Using Capillary Electrophoresis: Quantitative Studies," Zhang, Y.; Kaddis, J.; Silverio, C.; Zurita, C.; Gomez, F. A. *J. Cap. Elect. Microchip Tech.* **2002**, *7*, 1-9.
33. "Determination of Binding Constants Between Teicoplanin and D-Ala-D-Ala Terminus Peptides by Affinity Capillary Electrophoresis", Silverio, C. F.; Plazas, A.; Moran, J.; Gomez, F. A. *J. Liq. Chrom. & Rel. Tech.* **2002**, *25*, 1677-1691.
34. "Flow-Through Partial-Filling Affinity Capillary Electrophoresis Can Estimate Binding Constants of Neutral Ligands to Receptors Via a Competitive Assay Technique", Kaddis, J.; Mito, E.; Heintz, J.; Plazas, A.; Gomez, F. A. *Electrophoresis*, **2003**, *24*, 1105-1110.
35. "Separation of DNA by Capillary Electrophoresis in Uncoated Silica Columns Using Hydroxypropylmethyl Cellulose as the Sieving Matrix", Villareal, V.; Zhang, Y.; Zurita, C.; Moran, J.; Silva, I.; Gomez, F. A. *Anal. Lett.* **2003**, *36*, 451-463.
36. "Determination of Binding Constants Between the Antibiotic Ristocetin A and D-Ala-D-Ala Terminus Peptides by Affinity Capillary Electrophoresis", Azad, M.; Hernandez, L.; Plazas, A.; Rudolph, M.; Gomez, F. A. *Chromatographia*, **2003**, *57*, 339-344.
37. "On-Column Derivatization and Analysis of the Antibiotics Teicoplanin and Ristocetin Coupled to Affinity Capillary Electrophoresis", Silverio, C. F.; Azad, M.; Gomez, F. A. *Electrophoresis*, **2003**, *24*, 808-815.
38. "Partial-Filling Affinity Capillary Electrophoresis", Villareal, V.; Kaddis, J.; Azad, M.; Zurita, C.; Silva, I.; Hernandez, L.; Rudolph, M.; Moran, J.; Gomez, F. A. *Anal. Bioanal. Chem.* **2003**, *376*, 822-831.
39. "On-Column Synthesis Coupled to Affinity Capillary Electrophoresis to Determine Binding Constants of Peptides to Glycopeptide Antibiotics", Azad, M.; Silverio, C.; Zhang, Y.; Villareal, V.; Gomez, F. A. *J. Chromatogr., A*, **2004**, *1027*, 193-204.
40. "Partial-Filling Techniques for Affinity Capillary Electrophoresis to Probe Receptor-Ligand Interactions", Brown, A.; Silva, I.; Chinchilla, D.; Hernandez, L.; Gomez, F. A. *LCGC Europe*, **2004**, 1-7.
41. "Estimation of Binding Constants for the Substrate and Activator of *Rhodobacter sphaeroides* ADP-Glucose Pyrophosphorylase Using Affinity Capillary Electrophoresis", Kaddis, J.; Zurita, C.; Moran, J.; Borra, M.; Polder, N.; Meyer, C. R.; Gomez, F. A. *Anal. Biochem.* **2004**, *327*, 252-260.
42. "Estimation of Binding Constants between Ristocetin and Teicoplanin to Peptides Using On-Column Ligand Derivatization Coupled to Affinity Capillary Electrophoresis", Azad, M.; Brown, A.; Silva, I.; Gomez, F. A. *Anal. Bioanal. Chem.* **2004**, *379*, 149-155.
43. "Use of a Dual-marker Form of Analysis to Estimate Binding Constants Between Receptors and Ligands by Affinity Capillary Electrophoresis", Villareal, V.; Brown, A.; Gomez, A.; Silverio, C.; Gomez, F. A., *Chromatographia*, **2004**, *60*, 73-78.
44. "Optimization of Conditions for Flow-Through Partial-Filling Affinity Capillary Electrophoresis to Estimate Binding Constants of Ligands to Receptors", Brown, A.; Desharnais, R.; Roy, B.C.; Malik, S.; Gomez, F. A. *Anal. Chim. Acta*, **2005**, *540*, 403-410.
45. "Flow Injection-Capillary Electrophoresis (FI-CE): Recent Advances and Applications", Hanrahan, G.; Dahdouh, F.; Clarke, F.; Gomez, F.A. *Curr. Anal. Chem.* **2005**, *1*, 321-328.

46. "Multiple-Injection Affinity Capillary Electrophoresis to Estimate Binding Constants of Receptors to Ligands", Chinchilla, D.; Zavaleta, J.; Martinez, K.; Gomez, F. A. *Anal. Bioanal. Chem.* **2005**, *383*, 625-631.
47. "Recent Developments in Affinity Capillary Electrophoresis. A Review", Zavaleta, J.; Chinchilla, D.; Brown, A.; Sogomonyan, T.; Ramirez, A.; Calderon, V.; Gomez, F. A. *Curr. Anal. Chem.* **2006**, *2*, 35-42.
48. "Multiple-Injection Affinity Capillary Electrophoresis to Examine Binding Constants Between Glycopeptide Antibiotics and Peptides", Zavaleta, J.; Chinchilla, D.; Martinez, K.; Gomez, F.A. *J. Chromatogr. A*, **2006**, *1105*, 59-65.
49. "Multiple-Injection Affinity Capillary Electrophoresis." Zavaleta, J.; Chinchilla, D.; Ramirez, A.; Calderon, V.; Gomez, F. A. *LCGC*, **2006**, *24*, 1118-1132; **2007**, 84-92.
50. "Partial Filling Affinity Capillary Electrophoresis Techniques to Probe the Binding of Glycopeptide Antibiotics to D-Ala-D-Ala Terminus Peptides", Zavaleta, J.; Chinchilla, D. B.; Kaddis, C. F.; Martinez, K.; Brown, A.; Gomez, A.; Pao, A.; Ramirez, A.; Nilapwar, S.; Ladbury, J. E.; Gomez, F. A. *J. Cap. Elect. Microchip Tech.*, **2006**, *9*, 101-117.
51. "Partial-Filling Multiple-Injection Affinity Capillary Electrophoresis (PFMIACE) to Examine Binding Constants of Receptors to Ligands," Zavaleta, J.; Chinchilla, D.; Ramirez, A.; Pao, A.; Martinez, K.; Nilapwar, S.; Ladbury, J. E.; Mallik, S.; Gomez, F. A., *Talanta*, **2007**, *71*, 192-201.
52. "1-[Ferrocenyl(hydroxy)methyl]-1,7-dicarba-*closo*-dodecaborane: Synthesis and X-ray Crystal Structure." Fields, J.; Ouyang, X.; Herron, S. R.; Kantarjieff, K. A.; Jabalameli, A.; Gomez, F. A. *J. Chem. Crystallogr.* **2007**, *37*, 55-62.
53. "Determination of Binding Constants of Polyethylene Glycol Vancomycin Derivatives to Peptide Ligands Using Affinity Capillary Electrophoresis," Hernandez, L.; Hanrahan, G.; Rudolph, M.; Lammertink, R.; Kornfield, J.; Gomez, F. A. *Chromatographia*, **2007**, *65*, 299-303.
54. "Design and Fabrication of Chemically Robust Three-Dimensional Microfluidic Valves," Maltezos, G.; Garcia, E.; Hanrahan, G.; Gomez, F. A.; Vjawhare, S.; van Dam, R. M.; Chen, Y.; Scherer, A. *Lab Chip*, **2007**, *7* 1209-1211.
55. "Implementation of Chemometric Methodology in Affinity Capillary Electrophoresis (ACE): Predictive Investigation of Protein-Ligand Binding", Hanrahan, G.; Montes, R.; Pao, A.; Johnson, A.; Gomez, F. A. *Electrophoresis*, **2007**, *28*, 2853-2860.
56. "Simple Fabrication of Fritless Chromatographic Microchips Packed with Conventional Reversed-Phase Silica Particles," Gaspar, A.; Piyasena, M. E.; Gomez, F. A. *Anal. Chem.* **2007**, *79*, 7906-7909.
57. "Design and Development of a Flow Injection-Capillary Electrophoresis (FI-CE) Analyzer Employing Fiber Optic Detection." Hanrahan, G.; Tse, F.; Dahdouh, F. T.; Clarke, K.; Gomez, F. A. *J. Cap. Elect. Microchip Tech.* **2007**, *10*, 1-6.
58. "Voltage Gradient Partial Filling Multiple Injection Affinity Capillary Electrophoresis to Estimate Binding Constants of Receptors to Ligands", Ramirez, A.; Gomez, F. A. *J. Cap. Elect. Microchip Tech.* **2007**, *10*, 43-50.
59. "Through-a-Chip Affinity Capillary Electrophoresis to Estimate Binding Constants Between Receptors and Ligands", Brown, A. L.; Morales, C.; Gomez, F. A. *Talanta*, **2008**, *74*, 605-612.
60. "Response Surface Examination of the Relationship Between Experimental Conditions and Product Distribution in Electrophoretically Mediated Microanalysis (EMMA)," Montes, R.; Gomez, F. A.; Hanrahan, G., *Electrophoresis*, **2008**, *29*, 375-380.
61. "Chemometric Experimental Design-Based Optimization Techniques in Capillary Electrophoresis: A Critical Review of Modern Applications", Hanrahan, G.; Montes, R.; Gomez, F. A., *Anal. Bioanal. Chem.* **2008**, *390*, 169-179.
62. "Electrochromatography in Fritless Chromatographic Microchips Packed with Conventional Reversed-Phase Silica Particles", Gaspar, A.; Hernandez, L.; Stevens, S.; Gomez, F. A., *Electrophoresis*, **2008**, *29*, 1638-1642.
63. "Magnetically Controlled Valve for Flow Manipulation in Polymer Microfluidic Devices," Gaspar, A.; Piyasena, M.; Daroczi, L.; Gomez, F. A. *Micro. Nano.* **2008**, *6*, 525-531.

64. "Chemometrical Experimental Design-Based Optimization Studies in Capillary Electrophoresis Applications", Montes, R.; Dahdouh, F.; Riveros, T. A.; Hanrahan, G.; Gomez, F. A. *LCGC*, **2008**, *26*, 712-721.
65. "Use of Chemometric Methodology in Optimizing Conditions for Competitive Binding Partial Filling Affinity Capillary Electrophoresis (PFACE)", Montes, R.; Hanrahan, G.; Gomez, F. A., *Electrophoresis*, **2008**, *29*, 3325-3332.
66. "Chemometrical Examination of Active Parameters and Interactions in Flow Injection-Capillary Electrophoresis (FI-CE)," Dahdouh, F. T.; Clarke, K.; Salgado, M.; Hanrahan, G.; Gomez, F. A. *Electrophoresis*, **2008**, *29*, 3779-3785.
67. "Fritless Chromatographic Microfluidic-Based Columns for Chemical Separations," Gaspar, A.; Goldberg, M.; Baghdachi, S.; Stevens, S.; Torres, J.; Salgado, M.; Gomez, F. A. *Am. Lab.* **2008**, *40*, 13-16.
68. "Magnetic Microsphere-Based Methods to Study the Interaction of Teicoplanin with Peptides and Bacteria," Piyasena, M. E.; Real, L. J.; Diamond, R. A.; Xu, H.; Gomez, F. A. *Anal. Bioanal. Chem.*, **2008**, *392*, 877-886.
69. "Microfluidic Polymerase Chain Reaction," Maltezos, G. M.; Gomez, A.; Zhong, J.; Gomez, F. A.; Scherer, A. *Appl. Phys. Lett.* **2008**, *93*, 243901.
70. "Frontal Analysis Microchip Capillary Electrophoresis to Study the Binding of Ligands to Receptors Derivatized on Magnetic Beads," Liu, X.; Gomez, F. A. *Anal. Bioanal. Chem.* **2009**, *393*, 615-621.
71. "Recent Advances in Affinity Capillary Electrophoresis (2007)," Liu, X.; Dahdouh, F.; Salgado, M.; Gomez, F. A. *J. Pharm. Sci.* **2009**, *98*, 394-410.
72. "Microchip Frontal Affinity Chromatography to Study the Binding of a Ligand to Teicoplanin-Derivatized Microbeads", Liu, X.; Gomez, F. A. *Electrophoresis* **2009**, *30*, 1194-1197.
73. "Development of Microfluidic Chips for Heterogeneous Receptor-Ligand Interaction Studies," Goldberg, M. D.; Lo, R. C.; Abele, S.; Macka, M.; Gomez, F. A. *Anal. Chem.* **2009**, *81*, 5095-5098.
74. "Fabrication of a Microfluidic Enzyme Reactor Utilizing Magnetic Beads," Liu, X.; Lo, R.; Gomez, F. A. *Electrophoresis*, **2009**, *30*, 2129-2133.
75. "Use of Magnetic Beads to Study the Interaction of Ristocetin with Peptides and Bacteria," Sarakhanikhorami, M.; Lo, R. C.; Gomez, F. A. *Bioanalysis*, **2009**, *1*, 715-719.
76. "Application of External Micro-Spectrophotometric Detection for Microchips", Gaspar, A.; Bacsí, I.; Garcia, E. F.; Braun, M.; Gomez, F. A. *Anal. Bioanal. Chem.* **2009**, *395*, 473-478.
77. "Application of Artificial Neural Networks in the Prediction of Product Distribution in Electrophoretically Mediated Microanalysis (EMMA)," Riveros, T. A.; Porcasi, L.; Muliadi, S.; Hanrahan, G.; Gomez, F. A. *Electrophoresis* **2009**, *30*, 2385-2389.
78. "On-Capillary Derivatization Using a Hybrid Artificial Neural Network-Genetic Algorithm Approach," Riveros, T. A.; Hanrahan, G.; Muliadi, S.; Arceo, J.; Gomez, F. A. *Analyst*, **2009**, *134*, 2067-2070.
79. "Use of Magnetic Beads in Microfluidic Binding Assays and On-Chip Enzymatic Microreactions," Riveros, T. A.; Lo, R.; Liu, X.; Valdez, A.; Lozano, M.; Gomez, F. A. *Am. Lab.* **2010**, *42*, 11-19.
80. "Analysis and Stability Study of Temozolomide Using Capillary Electrophoresis", Andradi, M.; Bustos, R.; Gaspar, A.; Gomez, F. A.; Kelkner, A. *J. Chromatogr. B*, **2010**, *878*, 1801-1808.
81. "Microfluidic Thin Chips for Chemical Separations," Gaspar, A.; Salgado, M.; Stevens, S.; Gomez, F. A. *Electrophoresis* **2010**, *31*, 2520-2525.
82. "Split Injection: A Simple Introduction of Subnanoliter Sample Volumes for Chip Electrophoresis," Gáspár, A.; Koczka, P. I.; Carmona, H.; Gomez, F. A. *Microchemical J.* **2011**, *99*, 180-185.
83. "Facile Fabrication of an Interface for On-Line Coupling of Microchip Capillary Electrophoresis to Surface Plasmon Resonance," Liu, X.; Du, M.; Zhou, F.; Gomez, F. A. *Bioanalysis* **2012**, *4*, 373-379.

84. "Human-on-a-Chip Technologies as the Next Generation Drug Screening Platforms," Yun, Y.; Lee, S.; Collins, B.; Gomez, F. A. Sankar, J. J. *Nanomedic. Biotherapeu. Discover* **2012**, 2, 1000e113.
85. "Development of an Ultra-Low Volume Flow-Cell for Surface Plasmon Resonance Detection in a Miniaturized Capillary Electrophoresis System," Gaspar, A.; Gomez, F. A. *Electrophoresis*, **2012**, 33, 1723-1728.
86. "Glass/PDMS Hybrid Microfluidic Device Integrating Vertically Aligned SWCNTs for Electrochemical Determination," Moraes, F.; Lima, R.; Segato, T.; Cesarino, T.; Melendez, J.; Machado, S.; Gomez, F. A.; Carrilho, E. *Lab Chip*, **2012**, 12, 1959-1962.
87. "Implementation of a Genetically Tuned Neural Platform in Optimizing Fluorescence from Receptor-Ligand Binding Interactions on Microchips," Alvarado, J.; Hanrahan, G.; Nguyen, H. T. H.; Gomez, F. A. *Electrophoresis*, **2012**, 33, 2711-2717.
88. "The Future of Microfluidic Point-of-Care (POC) Diagnostic Devices," Gomez, F. A. *Bioanalysis*, **2013**, 5, 1-3.
89. "Application of Surface Plasmon Resonance Spectroscopy for Adsorption Studies of Different Types of Components on Poly(dimethylsiloxane)", Gaspar, A.; Gomez, F. A. *Anal. Chim. Acta*, **2013**, 777, 72-77.
90. "Use of Surface Plasmon Resonance to Study the Adsorption of Detergents on Poly(dimethylsiloxane) Surfaces", Gaspar, A.; Kecskemeti, A.; Gomez, F. A. *Electrophoresis*, **2013**, 34, 1249-1252.

Books

1. "Biological Applications of Microfluidics," Gomez, F. A. ed., Wiley & Sons, Inc., 2008.
2. "Chemometrics in Capillary Electrophoresis," Hanrahan, G.; Gomez, F. A. eds., John Wiley & Sons, Inc., 2009.

Book Chapters

1. Affinity Capillary Electrophoresis to Examine Receptor-Ligand Interactions. Azad, M.; Kaddis, J.; Villareal, V.; Hernandez, L.; Silverio, C. S.; Gomez, F. A. In *Methods in Molecular Biology*, Humana Press, 2004, pp 153-168.
2. Applications of Capillary Electrophoresis to Molecular Recognition and Analysis of In-Capillary Enzyme-Mediated Transformations. Zavaleta, J.; Chinchilla, D.; Brown, A.; Ramirez, A.; Calderon, V.; Sogomonyan, T.; Montes, R.; Gomez, F. A. In *Advances in Chromatography*, CRC Press, 2006, pp 125-172.
3. Microfluidics. Gomez, F. A. In *Biological Applications of Microfluidics*, Gomez, F. A. Ed. John Wiley & Sons, Inc., 2008, pp. 1-7.
4. Chemical Separations in 3D Microfluidics. Maltezos, G. M.; Gomez, A.; Gomez, F. A.; Scherer, A. In *Biological Applications of Microfluidics*; Gomez, F. A., Ed. John Wiley & Sons, Inc., 2008, pp. 263-272.
5. Magnetic Bead-Based Methods to Study the Interaction of Teicoplanin with Peptides and Bacteria. Piyasena, M. E.; Gomez, F. A. In *Biological Applications of Microfluidics*; Gomez, F. A., Ed. John Wiley & Sons, Inc., 2008, pp. 473-488.
6. On-Column Ligand/Receptor Derivatization Coupled to Affinity Capillary Electrophoresis. Zavaleta, J.; Chinchilla, D.; Gomez, A.; Sogomonyan, T.; Silverio, C.; Azad, J. Gomez, F. A. In *Methods in Molecular Biology*, Schmitt-Kopplin, P., Ed. Humana Press, 2008, pp. 647-660.
7. Chemometrical Experimental Design-Based Optimization Studies in Capillary Electrophoresis Applications. Montes, R.; Riveros, T. A.; Dahdouh, F.; Hanrahan, G.; Gomez, F. A. In *Chemometric Methods in Capillary Electrophoresis*, Hanrahan, G. and Gomez, F. A. eds., John Wiley & Sons, Inc., 2009, pp. 75-92.
8. Microfluidics in Protein Chromatography. Gomez, F. A. In *Protein Chromatography: Methods and Protocols in Methods in Molecular Biology*, Loughgan, S. and Walls, D., Eds. Humana Press, 2011, pp. 137-150.
9. Microchip Capillary Electrophoresis to Study the Binding of Ligands to Teicoplanin Derivatized on Magnetic Beads. Riveros, T. A.; Lo, R.; Salgado, M.; Carmona, H.; Gomez, F. A. In

Capillary Electrophoresis and Microchip Capillary Electrophoresis, Garcia, C. D. and Carrilho, E., Eds. John Wiley & Sons, Inc., 2013, pp. 359-366.

Other Publication Activities

1. Bioorganometallic Chemistry: Faculty Working at a Scientific Interface. Gomez, F. A. *General Chemistry*; West, St. Paul, 1996; p 856.

Thesis Advising

1. Dong Zhao, M.S. 1997; Ph.D. from UC Riverside.
2. Eun-Soo Kwak, M.S., 1997; Ph.D. from University of Texas at Austin.
3. Jane Kawaoka, B.S., Departmental Honor's, 1998; Ph.D. from Yale University.
4. John Kaddis, B.S., Departmental Honor's, 2001; Ph.D. from USC.
5. Catherine Silverio, M.S., 2002; Ph.D. from UCLA.
6. Maryam Azad, M.S., 2003; in industry.
7. Valerie Villareal, B.S., Departmental Honor's, 2003; Ph.D. from UCLA.
8. Jose Zavaleta, M.S. 2005; in industry.
9. Dinora Chinchilla, B. S., Departmental Honor's, 2005.
10. Abby Brown, B.S., Departmental Honor's, 2005.
11. Jerry Fields, M.S., 2005.
12. Froseen Dahdouh, B.S., Departmental Honor's, 2006.
13. Ruthy Montes, M.S., 2007; in medical school at USC.
14. Lilia Hernandez, M.S., 2007, in industry.
15. Schetema Stevens, M.S., 2008.
16. Maral Sarikhani, M.S., 2008; in Ph.D. program in Pisa, Italy.
17. Mark Goldberg, M.S., 2008; in Ph.D. program at Caltech.
18. Erika Garcia, M.S., 2009; in Ph.D. program at Caltech.
19. Alejandra Ramirez, M.S., 2009.
20. Judith Alvarado, M.S., 2012.
21. Maria Ortega, M.S., in progress.
22. Jhanisus Melendez-Cetino, M.S., in progress.
23. Leonel Sanchez, M.S., in progress.
24. Chris Darakjian, M.S., in progress.
25. Julio Avila, M.S., in progress.

Other Current Student Research Assistants:

Hector Valadez, Hector Carmona, Juliette Ohan, Evangelin Lopez, Mary Arrastia, Micah Eropkin.

Past Student Research Assistants:

The following undergraduate students have conducted research under my auspices since 1994: Victor M. Dominguez, Kok W. Liu, Doreen M. Macias, Schake Matjan, Chuauthemoc Arellanes, Sally Esquivel, Joseph Heintz, Erica Mito, Cynthia Kodama, Alfredo Plazas, Cecilia Zurita, Julio Moran, Isba Silva, Marcellus Rudolph, Amaris Pao, Taguhi Sogomonyan, Chris Morales, Charles Ufomadu, Violet Calderon, Alvaro Gomez, Shima Baghdachi, Jaime Torres, Aileen Becerril, Jacquie Malette, Toni Ann Riveros, Maricar Gutierrez, Ariana Valdez, Miguel Ortiz, Angela Wu, Dan Botoaca, Kimberly Rampasan,, Lina Gonzalez (Italy), Daniel Cardenas, Marisol Salgado, Amy Wat, Rana Abdel-Al.

Past High School, Community College and University Summer Research Assistants:

Karla Martinez (B.S., 2009 Harvard), Marisol Salgado (now at CSULA), Rocio Vides (now at Stanford), Lenny Sanchez (now in industry), Illiana Escobar, Alejandra Leon, Karen Hernandez, Elie El-Habre, Maria Sanchez, Lynette Duran, Catalina Verduzco, Zachary Perez.

Past Postdoctoral and Visiting Faculty Associates:

Dr. Ying Zhang, 1999-2001.
Dr. Dazhi Wang, 2004.

Dr. Menake Piyasena, 2005-2007.

Dr. Attila Gaspar (University of Debrecen, Hungary), 2006-2007, 2011-2012.

Dr. Xiaojun Liu, 2007-2009.

Dr. Roger Lo, 2008-2009.

Dr. Mehdi Jalali-Heravi, 2013-present.

Current Grant Support

1. National Science Foundation, OISE-0754138 “International Research Experiences for Students (IRES): U.S.-Hungary Research and Education on Microfluidics Applications in the Chemical and Materials Sciences”; PI, \$126,522; 4/15/08-9/14/13.
2. National Science Foundation, CHE-0802907 “POWERING THE PLANET: A Chemical Bonding Center in the Direct Conversion of Sunlight into Chemical Fuel”; (Subcontract-PI), \$407,530; 8/1/08-7/31/13.
3. National Science Foundation, OISE-0850443 “International Research Experiences for Students (IRES): Ireland: Applications in the Chemical Separations Sciences”; PI, \$150,000; 9/1/09-8/31/13.
4. National Science Foundation, EEC-0812348 “NSF Engineering Research Center (ERC) for Revolutionizing Metallic Biomaterials”; (Subcontract-PI), \$155,000; 1/1/09-8/31/13.
5. National Science Foundation, HRD-0934146 “CREST Center for Energy and Sustainability”; (Co-PI), \$4,999,997; 9/1/09-8/31/14.
6. National Science Foundation, OISE-0965911 “Collaborative research: US-Brazil IRES”; PI, \$53,355; 9/1/10-8/31/13.

Past Grant Support

1. Research Corporation, CC3957; “The Use of Capillary Electrophoresis in the Synthesis and Analysis of Bioorganometallic Species”; PI, \$32,000; 6/1/95-5/31/97.
2. National Science Foundation Instrumentation and Laboratory Improvement Program, DUE-9552334; “Capillary Electrophoresis in the Undergraduate Curriculum”; PI, \$26,181; 7/1/95-6/30/97.
3. National Science Foundation ModularChem Consortium (Subproject); “Controlling Combustion Emissions: Minimizing Unwanted Products”; co-PI, \$29,999; 7/1/95-6/30/96.
4. National Institutes of Health Academic Research Enhancement Award, 1R15GM52619-01; “Bioorganometallic Chemistry: Synthesis and Analysis”; PI, \$101,775; 10/1/95-9/30/98.
5. National Institutes of Health Minority Biomedical Research Support (Subproject), 2 S06 GM08101-25; “Capillary Electrophoresis: Synthesis and Molecular Recognition Studies”; PI, \$236,417; 6/14/96-6/13/00.
6. National Science Foundation CISE/EHR/ENG/MPS Collaborative Research on Learning Technologies, CDA-9616563; “Project Technovision X-33 Planning Year”; co-PI, \$50,000; 10/1/96-9/30/97.
7. CSUPERB; “Structure/Function Studies of Diverse Bacterial ADP-Glucose Pyrophosphorylases”, co-PI (with C. Meyer, CSU Fullerton), \$4,500; 2000-2001.
8. National Science Foundation Faculty Early Career Development (CAREER) Program, CHE-9703142; “Applications in Capillary Electrophoresis”, PI, \$258,500; 4/15/97-3/31/2002.
9. Research Corporation, CC5293; “On-Column Enzymatic Degradation and Kinetics of Plasmids Using Capillary Electrophoresis”, PI, \$49,220; 6/1/2001-5/31/2003.
10. National Science Foundation Collaborative Research in Undergraduate Institutions (CRUI) Program, DBI-9710796; “Impacts of Urban Smog on Physiological Responses in *Arabidopsis Thaliana*”, co-PI (with R. Vellanoweth, S. Nickolaisen, J. Gamon, R. Nakamura), \$1,022,606; 10/1/97-9/30/2003.
11. Department of Defense (DoD) Infrastructure Support Program for HBCU/MI, F49620-02-1-0445; “Instrumentation for Research and the Undergraduate Curriculum”, PI, \$140,590; 9/15/02-9/14/03.
12. National Science Foundation “Center for Science and Engineering in Materials Research”, PI, \$195,516 (subcontract); 5/1/00-8/31/05.

13. National Science Foundation Research in Undergraduate Institutions (RUI), CHE-0136724; “Applications in Capillary Electrophoresis”; PI, \$268,900; 3/15/02-2/28/06.
14. National Institutes of Health Academic Research Enhancement Award, 1 R15 AI055515-01; “Capillary Electrophoresis: Bioanalytical Applications”, PI, \$141,200; 7/15/03-6/30/06.
15. National Institutes of Health Academic Research Enhancement Award, 1 R15 AI065468-01; “Bioanalytical Applications of Capillary Electrophoresis”, PI, \$141,200; 7/1/05-6/30/08.
16. National Science Foundation, SBIR-IIP-0753673 “Surface Modifications for Bioassays”; (Subcontract-PI), \$104,999; 8/1/08-4/31/09.
17. National Science Foundation, SBIR-IIP-0917642 “Polypins for High Throughput PCR”; (Subcontract-PI), \$104,999; 10/1/09-9/30/10, returned.
18. National Science Foundation, CBET-0723271 “MRI: Instrument Development of Microfluidic-Based Flow-Injection Capillary Electrophoresis with Fiber-Optics Detection”; PI, \$138,069; 7/1/07-6/31/10.
19. National Science Foundation, DMR-0351848 “CSULA-Caltech Partnership for Research and Education in Materials (PREM) Collaborative”; PI, \$2,895,568; 4/1/04-1/31/11.
20. National Science Foundation, MCB-0448676; “RUI: Regulation of Diverse Bacterial ADP-Glucose Pyrophosphorylases,” (Subcontract-PI) \$119,165; 3/1/05-2/28/11.
21. National Science Foundation Research in Undergraduate Institutions (RUI), CHE-0515363; “Microfluidic/Capillary Electrophoresis Devices for Chemical Analysis”; PI, \$450,000; 8/15/05-8/14/12.
22. National Science Foundation Materials Research Science & Engineering Centers (MRSEC), DMR-0520565; “Center for Science and Engineering of Materials (CSEM)”; (Subcontract-PI), \$442,557; 9/1/05-9/30/11.
23. National Science Foundation, DMR “CSULA-Caltech PREM Collaborative”; PI, \$99,999; 3/13/09-8/30/09.

Collaborators

Professor David Blekhman (Dept. of Technology, CSULA)

Professor Dermot Brabazon (National Centre for Sensor Research, Dublin City University)

Professor Emanuel Carrilho (Instituto de Química de São Carlos/Universidade de São Paulo, Brazil)

Professor Attila Gaspar (Dept. of Chemistry, University of Debrecen, Hungary)

Professor John Haan (Dept. of Chemistry and Biochemistry, CSU Fullerton)

Professor Grady Hanrahan (Dept. of Chemistry and Biochemistry, CSULA)

Dr. Naresh Menon (Chromologic, LLC)

Professor Arturo Pacheco-Vega (Dept. of Technology, CSULA)

Professor Yeoheung Yun (Bioengineering, North Carolina A&T State University)

Research Interests: The Gomez research group is engaged in developing fundamental and applied research in the area of microfluidics and capillary electrophoresis (CE). In microfluidics focus is on developing new microfluidic devices (MDs) for use in chemical and biochemical separations and point-of-care (POC) diagnostics. Current work involves the development of bead-based assays, surface plasmon resonance (SPR)-CE on chips, microfluidic direct methanol fuel cells (μ DMFCs), novel materials for microfluidics, chromatography on chips, hyphenated techniques, and affinity capillary electrophoresis (ACE). In CE focus is on developing new methodologies associated with ACE, and enzyme microreactors. Response surface methodology (RSM) and artificial neural networks (ANN) are also employed to experimentally optimize conditions in several microfluidic and CE applications.

Professional Societies

American Chemical Society

Society for Advancement of Chicanos and Native-Americans in Science

California Separation Science Society

Departmental Responsibilities

Elections Committee, 1994-1997.

Department of Chemistry and Biochemistry Seminar Coordinator, 1996-present.
Fiscal Affairs Committee, 1997-2000, Chair 1998-1999; 2007-2010, Chair 2008-2009.
Assessment Committee, Chair, 2006-2007, member 2007-2008; 2012-present.
Graduate Studies Committee, 2010-2011; 2012-present.
Instructional Affairs Committee, 2011-2012.

University Responsibilities

University Educational Policy Committee, 1995 (Fall).
Graduate Studies Subcommittee, 1995-1996.
Honors Convocation and Commencement Committee, 1995-1997.
University Faculty Policy Committee, Affirmative Action Subcommittee, 1995-1998, Co-chair 1996-1997; Chair 1997-1998.
Academic Senate, 1997-1998.
Creative Leaves and Activity Committee, 2002.
College Personnel Committee A, 2007-2008.
Search Committee, California Forensic Science Institute (CFSI), 2013.
Search Committee, Dean, School of Engineering, 2013.

Teaching Responsibilities

Inorganic and Advanced Inorganic Chemistry
General Chemistry
Special Topics in Chemistry: Solid State Chemistry, Organometallic Chemistry
Invited lecturer in Instrumental Chemical Analysis, Biochemistry and Biochemistry Laboratory

Consultant

Blackside Productions, BreakThrough Public Broadcasting System documentary, Boston, MA, 1993.
Technical Advisory Board, Materials Science Department, Don Bosco Technical Institute, 1995-present.
Physical Optics Corporation, 2005-2008.
ChromoLogic, LLC, 2007-present.
Great Minds in Stem, 2013-present.

Invited Seminars

California State University, Los Angeles, April 30, 1991.
San Jose State University, May 7, 1991.
Arizona State University, March 13, 1992.
California State University, Northridge, September 10, 1993.
University of Rhode Island, October 15, 1993.
University of Texas at El Paso, October 22, 1993.
Old Dominion University, November 19, 1993.
California State University, Los Angeles, December 2, 1993.
Southwest Texas State University, January 21, 1994.
University of Texas at Arlington, February 9, 1994.
Cal Poly San Luis Obispo, February 25, 1994.
East Los Angeles College, February 3, 1995.
San Diego State University, February 10, 1995.
Smith College, February 16, 1995.
Florida International University, March 17, 1995.
California State University, Los Angeles, March 28, 1995.
University of Washington, September 12, 1995.
California Polytechnic University, Pomona, November 7, 1995.
University of California, Riverside, November 9, 1995.
Southern Methodist University, March 20, 1996.
Loyola Marymount University, , October 4, 1996
Pomona College, October 17, 1996.

Mount Holyoke College, March 26, 1997.
University of Utah, May 29, 1997.
California State University, Fullerton, September 11, 1997.
California State University, Long Beach, September 17, 1997.
California State University, Los Angeles, November 21, 1997.
California State University, Fullerton, December 11, 2002.
California State University, Long Beach, November 5, 2003.
University of Southern California, November 11, 2003.
California Polytechnic University, Pomona, October 27, 2005.
University of California, Los Angeles, April 13, 2006.
Santa Monica College, October 9, 2006.
Keck Graduate Institute, November 30, 2006.
San Jose State University, March 6 2007.
University of California, Davis, March 13, 2007.
National Science Foundation, May 17, 2007.
University of Maryland, June 16, 2007.
Howard University, June 18, 2007.
Colorado State University, September 5, 2007.
West Virginia University, December 5, 2007.
University of Texas, San Antonio, February 1, 2008.
University of Washington, February 11, 2008.
University of Illinois, February 22, 2008.
University of California, Santa Barbara, March 18, 2008.
Pasadena City College, April 3, 2008.
California State University, San Bernardino, April 24, 2008.
National Science Foundation, May 12, 2008.
West Virginia University, May 13, 2008.
Dublin City University (Ireland), June 11, 2008.
Centre National de la Recherche Scientifique (Paris), June 13, 2008.
University of Debrecen (Hungary), June 17, 2008.
University of Vienna (Austria), June 19, 2008.
Chiral Technologies, August 20, 2008.
Los Angeles City College, October 22, 2008.
University of Texas, San Antonio, February 12, 2009.
University of Nevada, Las Vegas, September 17, 2010.
California State University, Long Beach, September 7, 2011.
California State University, Los Angeles, April 12, 2013
University of California, Riverside, April 18, 2013.

Conference Presentations (Underlined names denote undergraduate student co-authors.)

1. Synthesis and Design of Macrocyclic and Carborane Derived Chelating Agents for Tumor-Imaging and Radioimmunotherapy. Society for Advancement of Chicanos and Native Americans in Science Conference, Phoenix, AZ, January, 1990.
2. Silyl Substituted Carboranes: Substitution and Cage-Degradation Studies. Organosilicon Symposium, El Paso, TX, April, 1991.
3. Silyl Substituted Carboranes: Substitution and Cage-Degradation Studies. Gomez, F. A.; Johnson, S. E.; Hawthorne, M. F. 201st American Chemical Society National Meeting, Atlanta, GA, April, 1991.
4. Affinity Capillary Electrophoresis. Society for Advancement of Chicanos and Native-Americans in Science National Conference, Albuquerque, NM, January, 1993.
5. The Use of Affinity Capillary Electrophoresis for the Study of Biomolecular Noncovalent Interactions. 1995 Pacific Conference on Analytical Chemistry and Spectroscopy, Fullerton, CA, October, 1995.

6. A Multiple-Plug Binding Assay Using Affinity Capillary Electrophoresis. Gomez, F. A.; Mirkovich, J. N.; Dominguez, V. M.; Liu, W. K.; Macias, D. M. 31st Annual American Chemical Society Western Regional Meeting, San Diego, CA, October, 1995.
7. A Multiple-Plug Binding Assay Using Affinity Capillary Electrophoresis. Gomez, F. A.; Mirkovich, J. N.; Dominguez, V. M.; Matjan, S.; Mota, J.; Macias, D. M. 8th International Symposium on High Performance Capillary Electrophoresis, Orlando, FL, January, 1996.
8. The Society for Advancement of Chicanos and Native Americans in Science (SACNAS) - An Overview. The 51st Northwest Regional Meeting of the American Chemical Society, Corvallis, OR, June, 1996.
9. Enzyme-Catalyzed Microreactors Using Capillary Electrophoresis. Pacific Conference, San Francisco, CA, October, 1996.
10. Determination of the Binding of β -Cyclodextrin Derivatives to Adamantane Carboxylic Acids Using Affinity Capillary Electrophoresis. Pacific Conference, San Francisco, CA, October, 1996.
11. Affinity Capillary Electrophoresis. National Minority Research Symposium. Miami, FL, November, 1996.
12. Enzyme-Catalyzed Microreactions Using Capillary Electrophoresis: The Use of Sample-Stacking Methods. Zhao, D. S.; Gomez, F. A. 9th International Symposium on High Performance Capillary Electrophoresis, Anaheim, CA, January, 1997.
13. Determination of the Binding of β -Cyclodextrin Derivatives to Adamantane Carboxylic Acids Using Affinity Capillary Electrophoresis. Kwak, E. -S.; Kawaoka, J.; Gomez, F. A. 213th American Chemical Society National Meeting, San Francisco, CA, April, 1997.
14. Optimization of Capillary Electrophoresis Conditions For In-Capillary Enzyme-Catalyzed Microreactions. Kwak, E. -S.; Esquivel, S.; Gomez, F. A. 214th American Chemical Society National Meeting, Las Vegas, NV, September, 1997.
15. In-Capillary Enzyme-Catalyzed Microreactions Using Capillary Electrophoresis. Zhao, D. S.; Kawaoka, J.; Gomez, F. A. 214th American Chemical Society National Meeting, Las Vegas, NV, September, 1997.
16. Capillary Electrophoresis in the Undergraduate Curriculum. Kawaoka, J.; Gomez, F. A.; Esquivel, S.; Arellanes, C. 214th American Chemical Society National Meeting, Las Vegas, NV, September, 1997.
17. Double Enzyme-Catalyzed Microreactors Using Capillary Electrophoresis. Zhao, D. S.; Gomez, F. A. 11th International Symposium on High Performance Capillary Electrophoresis and Related Microscale Techniques, Orlando, FL, February, 1998.
18. Enzyme-Catalyzed Microreactors Using Capillary Electrophoresis. Gomez, F. A.; Zhao, D. S.; Kwak, E. -S.; Kawaoka, J.; Esquivel, S. 1998 Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy, New Orleans, LA, March, 1998.
19. Use of Mobility Ratios to Estimate Binding Constants of Ligands to Proteins in Affinity Capillary Electrophoresis. Kawaoka, J.; Heintz, J.; Mendoza, M.; Gomez, F. A. 216th American Chemical Society National Meeting, Boston, MA, August, 1998.
20. Bioanalytical Applications of Capillary Electrophoresis. Gomez, F. A. Society for Advancement of Chicanos and Native-Americans in Science National Conference, Washington D.C., October, 1998.
21. Use of Mobility Ratios to Estimate Binding Constants of Ligands to Proteins in Affinity Capillary Electrophoresis. Kawaoka, J.; Heintz, J.; Gomez, F. A. 12th International Symposium on High Performance Capillary Electrophoresis and Related Microscale Techniques, Palm Springs, CA, January, 1999.
22. Use of a Partial-Filling Technique in Affinity Capillary Electrophoresis for Determining Binding Constants of Ligands to Receptors. Heintz, J.; Hernandez, M.; Gomez, F. A. Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy, Orlando, FL, March, 1999.
23. Use of a Partial-Filling Technique in Affinity Capillary Electrophoresis for Determining Binding Constants of Ligands to Receptors. Heintz, J.; Hernandez, M.; Gomez, F. A. 217th American Chemical Society National Meeting, Anaheim, CA, March, 1999.

24. Flow-Through Partial-Filling Affinity Capillary Electrophoresis Can Estimate Binding Constants of Ligands to Receptors. Mito, E.; Heintz, J.; Hernandez, M.; Kodama, C.; Gomez, F. A. 218th American Chemical Society National Meeting, New Orleans, LA, August, 1999.
25. A Competitive Binding Assay Using Flow-Through Partial-Filling Affinity Capillary Electrophoresis. Mito, E.; Heintz, J.; Plazas, A.; Gomez, F. A. 219th American Chemical Society National Meeting, San Francisco, CA, March, 2000.
26. Tetrabutylammonium Fluoride Promoted Synthesis of *o*-Carborane Derivatives. Plazas, A.; Arellanes, C.; Gomez, F. A. 219th American Chemical Society National Meeting, San Francisco, CA, March, 2000.
27. Use of Capillary Electrophoresis and Indirect Detection to Quantitate In-Capillary Enzyme-Catalyzed Microreactions. Zhang, Y.; Gomez, F. A. 219th American Chemical Society National Meeting, San Francisco, CA, March, 2000.
28. In-Capillary Enzyme-Catalyzed Microreactions Using Indirect Detection. Zhang, Y.; Gomez, F. A. CE in the Pharmaceutical Industry: Practical Applications for the Analysis of Proteins, Nucleotides and Small Molecules, San Diego, CA, August, 2000.
29. Estimation of Receptor-Ligand Interactions by the Use of a Two-Marker System in Affinity Capillary Electrophoresis. Kaddis, J.; Zhang, Y.; Gomez, F. A. 221st American Chemical Society National Meeting, San Diego, CA, April, 2001.
30. On-Column Ligand Synthesis Coupled to Partial-Filling Affinity Capillary Electrophoresis. Zhang, Y.; Kodama, C.; Zurita, C.; Gomez, F. A. 221st American Chemical Society National Meeting, San Diego, CA, April, 2001.
31. On-Column Ligand Synthesis Coupled to Partial-Filling Affinity Capillary Electrophoresis. Zhang, Y.; Kodama, C.; Zurita, C.; Gomez, F. A. 24th International Symposium on Capillary Chromatography and Electrophoresis, Las Vegas, NV, May, 2001.
32. On-Column Synthesis Coupled to Affinity Capillary Electrophoresis to Determine Binding Constants of Peptides to Glycopeptide Antibiotics. Azad, M.; Silverio, C.; Zhang, Y.; Villareal, V.; Gomez, F. A. 26th International Symposium on Capillary Chromatography and Electrophoresis, Las Vegas, NV, May, 2003.
33. Affinity Capillary Electrophoresis: From Capillaries to Microfluidic Devices and Back. Gomez, F. A.; Brown, A.; Chinchilla, D.; Zavaleta, J. 28th International Symposium on Capillary Chromatography and Electrophoresis, Las Vegas, NV, May, 2005.
34. Microfluidic “Lab-on-a-Chip” Devices for Affinity Capillary Electrophoresis Separations. Brown, A.; Morales, C.; Ufomadu, C.; Gomez, F. A. International Congress of Nanotechnology, San Francisco, CA, November, 2005.
35. Applications of Nanotechnology: The Atom’s the Limit. Gomez, F. A. The 40th Western Regional ACS, Anaheim, CA, January, 2006.
36. The CSULA-Caltech Partnership for Research and Education in Materials (PREM) Collaborative. A Model for the Future. Gomez, F. A. Materials Research Society Meeting, San Francisco, CA, April, 2006.
37. CSULA-Caltech Partnership for Research and Education in Materials (PREM) Collaborative: A Model for the Future. Gomez, F. A. 232nd American Chemical Society National Meeting, San Francisco, CA, September, 2006.
38. Microfluidics: The Unbearable Lightness of Being “Small”. Gomez, F. A. CSUPERB, January 13, 2007.
39. CSULA-Caltech Partnership for Research and Education in Materials (PREM) Program: Empowering Minority Students Through Research. Gomez, F. A. Western Regional Meeting American Chemical Society, San Diego, CA, October, 2007.
40. Novel Valve Actuation and Applications in Microfluidics. Gomez, F. A.; Gaspar, A.; Piyasena, M.; Stevens, S.; Salgado, M. Federation of Analytical Chemistry and Spectroscopy Societies (FACSS), Memphis, TN, October, 2007.
41. Affinity Capillary Electrophoresis and other Separations on a Microfluidic Format. Gomez, F. A.; Brown, A.; Piyasena, M.; Gaspar, A.; Stevens, S. American Vacuum Society (AVS), Seattle, WA, October, 2007.
42. Development of Magnetically Controlled Valves in Fritless Chromatographic Microchips Packed with Conventional Reversed-Phase Silica Particles and Their use in Chemical

- Separations. Gomez, F. A.; Gaspar, A.; Piyasena, M. 31st International Symposium on Capillary Chromatography and Electrophoresis, Albuquerque, NM, November, 2007.
43. Simple Fabrication of Fritless Chromatographic Microchips Packed with Conventional Reversed-Phase Silica Particles and Small-Molecule Separations. Gaspar, A.; Piyasena, M.; Stevens, S.; Hernandez, L.; Gomez, F. A. Pittcon, New Orleans, LA, March, 2008.
 44. The CSULA-Caltech Partnership for Research and Education in Materials (PREM) Collaborative. Empowering Students Through Research. Gomez, F. A. 235th American Chemical Society National Meeting, New Orleans, LA, April, 2008.
 45. Simple Fabrication and Use of Fritless Chromatographic Microchips Packed with Reversed-Phase Silica Particles for Small-Molecule Separations. Gomez, F. A. 235th American Chemical Society National Meeting, New Orleans, LA, April, 2008.
 46. Use of Microfluidics for Separations and Affinity Measurements. Gomez, F. A. 236th American Chemical Society National Meeting, Philadelphia, PA, August, 2008.
 47. Microchip Affinity Capillary Electrophoresis to Estimate Binding Constants Between Receptors and Ligands. Liu, X.; Sarikhanikhorami, M.; Goldberg, M.; Gomez, F. A. 42nd Western Regional Meeting American Chemical Society, Las Vegas, NV, September, 2008.
 48. Development of Microfluidic Chips for Heterogeneous Receptor-Ligand Interactions. Gomez, F. A. Lab Automation, Palm Springs, CA, February, 2011.
 49. Development of Microfluidic Chips for Heterogeneous Receptor-Ligand Interactions. Gomez, F. A. 236th American Chemical Society National Meeting, Anaheim, CA, March, 2011.
 50. Development of Microfluidic-based Platforms for Diversified Analysis of Chemical Species. Gomez, F. A. Latin-American Capillary Electrophoresis (LACE) Conference, Hollywood, FL, December, 2011.
 51. Development of Microfluidic-based Platforms for Diversified Analysis of Chemical Species. Gomez, F. A. 238th American Chemical Society National Meeting, San Diego, CA, March, 2012.

Student and Postdoctoral Fellow Conference Presentations (Underlined names denote undergraduate student co-authors.)

1. A Multiple-Plug Binding Assay Using Affinity Capillary Electrophoresis. Gomez, F. A.; Mirkovich, J. N.; Dominguez, V. M.; Zhao, D. S.; Kwak, E.; Macias, D. M. Southern California Conference on Undergraduate Research (SCCUR), Claremont, CA, November, 1995.
2. Determination of the Binding of β -Cyclodextrin Derivatives to Adamantane Carboxylic Acids Using Affinity Capillary Electrophoresis. Kwak, E. -S.; Kawaoka, J.; Gomez, F. A. 1996 Undergraduate Research Conference, Santa Barbara, CA, April, 1996.
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 60. Development of Capillary Electrophoresis Laser Induced Fluorescence. Gomez, A.; Gomez, F. A. 39th Western Regional Meeting of the American Chemical Society, October 2004.
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 62. Optimization of Conditions for Flow-Through Partial-Filling Affinity Capillary Electrophoresis to Estimate Binding Constants of Ligands to Receptors. Brown, A. L.; Gomez, F. A. 39th Western Regional Meeting of the American Chemical Society, October 2004.
 63. Probing Receptor-Ligand Interactions Using Affinity Capillary Electrophoresis via a Multiple Injection Technique. Zavaleta, J. A.; Chinchilla, D.; Martinez, K.; Gomez, F. A. 39th Western Regional Meeting of the American Chemical Society, October 2004.
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76. Optimization of PDMS-Based Microfluidics for Biological Applications. Morales, C.; Gomez, F. A. Gordon Research Conference. Physics and Chemistry of Microfluidics. Oxford, England. August, 2005.
77. Partial Filling Multiple Injection Affinity Capillary Electrophoresis (PFMIACE) to Estimate Binding Constants of Receptors to Ligands. Ramirez, A.; Chinchilla, D.; Zavaleta, J.; Gomez, F. A. Southern California Conference on Undergraduate Research (SCCUR), Riverside, CA, November, 2005.
78. On-Column Ligand Derivatization Coupled to Multiple Injection Affinity Capillary Electrophoresis. Calderon, V.; Zavaleta, J.; Gomez, F. A. Southern California Conference on Undergraduate Research (SCCUR), Riverside, CA, November, 2005.
79. Development of a Microfluidic Device for Polymerase Chain Reaction. Gomez, A.; Maltezos, G.; Scherer, A.; Gomez, F. A. Southern California Conference on Undergraduate Research (SCCUR), Riverside, CA, November, 2005.
80. Development of a Flow Injection Capillary Electrophoresis (FI-CE) System Using Fiber Optic Detection. Dahdouh, F.; Tse, F.; Clarke, K.; Hanrahan, G.; Gomez, F. A. Southern California Conference on Undergraduate Research (SCCUR), Riverside, CA, November, 2005.
81. The Design and Development of a Flow Injection-Capillary Electrophoresis (FI-CE) Analyzer Employing Fiber Optic Detection. Tse, F.; Dahdouh, F.; Hanrahan, G.; Gomez, F. A. The 40th Western Regional ACS, Anaheim, CA, January, 2006.
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83. On-Column Ligand Derivatization Coupled to Multiple Injection Affinity Capillary Electrophoresis. Calderon, V.; Gomez, F. A. The 40th Western Regional ACS, Anaheim, CA, January, 2006.
84. Estimation of Binding Constants for the Substrate and Activator of Agrobacterium Tumefaciens Adenosine 5'-Diphosphate-Glucose Pyrophosphorylase Using Affinity Capillary Electrophoresis. Sogomonyan, T.; Meyer, C.; Gomez, F. A. The 40th Western Regional ACS, Anaheim, CA, January, 2006.
85. Development of a Microfluidic Device for Polymerase Chain Reaction. Gomez, A.; Maltezos, G.; Scherer, A.; Gomez, F. A. The 40th Western Regional ACS, Anaheim, CA, January, 2006.
86. Further Development of a Microchip Device for Polymerase Chain Reaction. Gomez, A.; Maltezos, G.; Scherer, A.; Gomez, F. A. 20th International Symposium and Exhibit on High Performance Liquid Phase separations and Related Techniques. San Francisco, CA, June, 2006.
87. A Bead-Based Lab-on-a-Chip Device for the Detection of Vancomycin Binding. Piyasena, M.; Gomez, F. A. 20th International Symposium and Exhibit on High Performance Liquid Phase separations and Related Techniques. San Francisco, CA, June, 2006.
88. Advances in Partial Filling Multiple Injection Affinity Capillary Electrophoresis (PFMIACE) to Estimate Binding Constants of Receptors and Ligands. Ramirez, A.; Gomez, F. A. 20th International Symposium and Exhibit on High Performance Liquid Phase separations and Related Techniques. San Francisco, CA, June, 2006.
89. Use of Affinity Capillary Electrophoresis to Determine Binding Constants of Polyethylene Glycol (PEG)-Vancomycin and Linked Teicoplanin Species to Peptide Ligands. Hernandez, L.; Kornfield, J. Gomez, F. A. 20th International Symposium and Exhibit on High Performance Liquid Phase separations and Related Techniques. San Francisco, CA, June, 2006.
90. A Microfluidic-Based Method for Recovering Enhanced Enzymatic Activity of Membrane Bound Proteins from Isolated Rat Liver Cells. Goldberg, M.; Menon, N.; Zeltser, G.; Gomez, F. A. 20th International Symposium and Exhibit on High Performance Liquid Phase separations and Related Techniques. San Francisco, CA, June, 2006.
91. Development of a Microcolumn Device for Column Chromatography on a Microfluidics Platform. Gomez, A.; Gomez, F. A. 232nd American Chemical Society National Meeting, San Francisco, CA, September, 2006.

92. Membrane Protein Extraction with Microfluidics Systems. Menon, N.; Zeltser, G.; Gomez, F. A.; Piyasena, M.; Goldberg, M. 232nd American Chemical Society National Meeting, San Francisco, CA, September, 2006.
93. Bead-Based Methods to Detect the Binding of Ligands to Vancomycin-Group Glycopeptide Antibiotics. Piyasena, M.; Diamond, R. A.; Gomez, F. A. 232nd American Chemical Society National Meeting, San Francisco, CA, September, 2006.
94. Optimization of Affinity Capillary Electrophoresis (ACE) Conditions Using Chemometrics. Montes, R. E.; Pao, A.; Hanrahan, G. S.; Gomez, F. A. 232nd American Chemical Society National Meeting, San Francisco, CA, September, 2006.
95. Development of a Flow Injection – Capillary Electrophoresis (FI-CE) System Using Fiber Optic Detection. Dahdouh, F.; Tse, F.; Clarke, K.; Hanrahan, G. S.; Gomez, F. A. 232nd American Chemical Society National Meeting, San Francisco, CA, September, 2006.
96. Developments in Flow-Based Fiber Optic Detection on a Microfluidic Format. Garcia, E.; Hanrahan, G. S.; Scherer, A.; Gomez, F. A. 232nd American Chemical Society National Meeting, San Francisco, CA, September, 2006.
97. A Microfluidic-Based Method for Recovering Enhanced Enzymatic Activity of Membrane Bound Proteins from Isolated Rat Liver Cells. Goldberg, M.; Menon, N.; Zeltser, G.; Gomez, F. A. 232nd American Chemical Society National Meeting, San Francisco, CA, September, 2006.
98. Advances in Partial Filling Multiple Injection Affinity Capillary Electrophoresis (PFMIACE) to Estimate Binding Constants of Receptors and Ligands. Ramirez, A.; Gomez, F. A. 232nd American Chemical Society National Meeting, San Francisco, CA, September, 2006.
99. “Lab-Through-a-Chip” Affinity Capillary Electrophoresis to Estimate Binding Parameters of ligands to Receptors. Brown, A. L.; Gomez, F. A. 232nd American Chemical Society National Meeting, San Francisco, CA, September, 2006.
100. Use of affinity Capillary Electrophoresis to Determine Binding Constants of Polyethylene Glycol (PEG)-Vancomycin and Linked Teicoplanin Species to peptide ligands. Hernandez, L.; Gomez, F. A. 232nd American Chemical Society National Meeting, San Francisco, CA, September, 2006.
101. Multiple-Injection Affinity Capillary Electrophoresis to Estimate Binding Constants of Receptors to Ligands. Calderon, V.; Chinchilla, D.; Zavaleta, J.; Gomez, F. A. 232nd American Chemical Society National Meeting, San Francisco, CA, September, 2006.
102. Estimation of Binding Constants for the Substrate and Activator of *Rhodospirillum Rubrum* Adenosine 5'-Diphosphate-Glucose Pyrophosphorylase Using Affinity Capillary Electrophoresis. Sogomonyan, T.; Meyer, C. R.; Gomez, F. A. 232nd American Chemical Society National Meeting, San Francisco, CA, September, 2006.
103. Development of a Micro Column Device for Flash Chromatography. Gomez, A.; Maltezos, G.; Scherer, A.; Gomez, F. A. Southern California Conference on Undergraduate Research (SCCUR), Los Angeles, CA, November, 2006.
104. Advances in Partial Filling Multiple Injection Affinity Capillary Electrophoresis (PFMIACE) to Estimate Binding Constants of Receptors and Ligands. Ramirez, A.; Gomez, F. A. Southern California Conference on Undergraduate Research (SCCUR), Los Angeles, CA, November, 2006.
105. Chemically Robust Three-Dimensional Microfluidic Valves. Garcia, E.; Maltezos, G.; Scherer, A.; Gomez, F. A.; Hanrahan, G. Southern California Conference on Undergraduate Research (SCCUR), Los Angeles, CA, November, 2006.
106. Estimation of Binding Constants for the Substrate and Activator of *Rhodospirillum Rubrum* Adenosine 5'-Diphosphate-Glucose Pyrophosphorylase Using Affinity Capillary Electrophoresis. Sogomonyan, T.; Meyer, C. R.; Gomez, F. A. Southern California Conference on Undergraduate Research (SCCUR), Los Angeles, CA, November, 2006.
107. Chemometrics Optimization of Flow Injection- Capillary Electrophoresis (FI-CE) Analyzer. Hundal, A.; Dahdouh, F.; Gomez, F. A.; Hanrahan, G. Southern California Conference on Undergraduate Research (SCCUR), Los Angeles, CA, November, 2006.
108. Magnetically Controlled Valve for Polymeric Flow Manipulation in Polymeric Microfluidic Devices. Gaspar, A.; Piyasena, M. E.; Gomez, F. A. Nanotechnology Trade Show, Santa Clara, CA, May, 2007.

109. New Sample Injection Methods for Chip Electrophoresis. Gaspar, A.; Piyasena, M. E.; Gomez, F. A. Nanotechnology Trade Show, Santa Clara, CA, May, 2007.
110. Fabrication of Thin Microfluidic Chips for Chromatographic Separations and Microreactors. Stevens, S.; Gaspar, A.; Gomez, F. A. Western Regional Meeting American Chemical Society, San Diego, CA, October, 2007.
111. Use of Chemometrics for Experimental Optimization of Flow Injection Capillary Electrophoresis (FI-CE) Analysis. Dahdouh, F. T.; Gomez, F. A.; Hanrahan, G. Western Regional Meeting American Chemical Society, San Diego, CA, October, 2007.
112. Optimization Using Chemometric Response Surface Modeling Design. Montes, R.; Gomez, F. A.; Hanrahan, G. Western Regional Meeting American Chemical Society, San Diego, CA, October, 2007.
113. Development of a Microcolumn for the Separation of Chemicals and Proteins. Gomez, A.; Gomez, F. A. Western Regional Meeting American Chemical Society, San Diego, CA, October, 2007.
114. Fabrication of Microfluidic Chips and Their Applications. Salgado, M.; Gomez, F. A. Southern California Conference on Undergraduate Research (SCCUR), Los Angeles, CA, October, 2007.
115. Fabrication of Thin Chips for Chromatographic Separations and Microreactors. Stevens, S.; Gaspar, A.; Gomez, F. A. 31st International Symposium on Capillary Chromatography and Electrophoresis, Albuquerque, NM, November, 2007.
116. Experimental Optimization of Flow Injection Capillary Electrophoresis (FI-CE) Analysis Using Chemometrics. Dahdouh, F. T.; Gomez, F. A.; Hanrahan, G. 31st International Symposium on Capillary Chromatography and Electrophoresis, Albuquerque, NM, November, 2007.
117. Fabrication of Thin Microfluidic Chips. Stevens, S.; Gaspar, A.; Gomez, F. A. Twentieth Annual CSUPERB Symposium, Oakland, CA, January, 2008.
118. Chemically Robust Microfluidic Chips. Garcia, E.; Maltezos, G.; Hanrahan, G.; Gomez, F. A. Twentieth Annual CSUPERB Symposium, Oakland, CA, January, 2008.
119. Optimization Utilizing Chemometrics in a Flow-Injection Capillary Electrophoresis (FI-CE) Analyzer. Dahdouh, F. T.; Gomez, F. A. Twentieth Annual CSUPERB Symposium, Oakland, CA, January, 2008.
120. Formation of a Chemical Gasket Inside a Microfluidic Chip. Goldberg, M.; Gomez, F. A. Twentieth Annual CSUPERB Symposium, Oakland, CA, January, 2008.
121. Incorporation of Zr(IV) Lewis Acids in Microfluidic Devices for Enantiomeric Separation. Torres, J. A.; Tikkanen W.; Gomez, F. A. Twentieth Annual CSUPERB Symposium, Oakland, CA, January, 2008.
122. Chemically Robust Microfluidic Fabrication and Related Applications. Garcia, E.; Hanrahan, G.; Gomez, F. A. Pittcon, New Orleans, LA, March, 2008.
123. Fabrication of Thin Microfluidic Chips for Chromatographic Separations and Microreactors. Stevens, S.; Gaspar, A.; Gomez, F. A. Pittcon, New Orleans, LA, March, 2008.
124. Synthesis of Silica Supported Zr(IV) Chiral Complexes for Use as Heterogeneous Catalysts. Torres, J. A.; Garcia, Y.; Chin, T.; Anderson, D.; Gomez, F. A.; Tikkanen, W. 235th American Chemical Society National Meeting, New Orleans, LA, April, 2008.
125. Studying the Interactions Between Glycopeptide Antibiotic and Peptides by Microchip Capillary Electrophoresis. Liu, X.; Gomez, F. A. 236th American Chemical Society National Meeting, Philadelphia, CA, August, 2008.
126. Surface Plasmon Resonance Detection for Microchip Capillary Electrophoresis. Liu, X.; Du, M.; Zhou, F.; Gomez, F. A. 42nd Western Regional Meeting American Chemical Society, Las Vegas, NV, September, 2008.
127. Automated Moveable Magnetically Controlled Valve in a Microfluidic Device. Botoaca, D.; Santina, A.; Gomez, F. A. Southern California Conference on Undergraduate Research (SCCUR), Pomona, CA, October, 2008.
128. Application of Artificial Neural Networks in the Prediction of Product Distribution in Electrophoretically Mediated Microanalysis (EMMA). Riveros, T.; Gomez, F. A. Southern California Conference on Undergraduate Research (SCCUR), Pomona, CA, October, 2008.

129. Application of Artificial Neural Networks in the Prediction of Product Distribution in Electrophoretically Mediated Microanalysis (EMMA). Riveros, T.; Hanrahan, G.; Gomez, F. A. Southern California Undergraduate Research Conference, Los Angeles, CA, April 2009.
130. Automated Moveable Magnetically Controlled Valve in a Microfluidic Device. Botoaca, D.; Santana, A.; Gomez, F. A. Southern California Undergraduate Research Conference, Los Angeles, CA, April 2009.
131. Binding Assays on Microfluidic Platforms to Probe Receptor-Ligand Interactions. Wat, A.; Ortega, M.; Ortega, M.; Gomez, F. A. 22nd Annual CSUPERB Symposium, Oakland, CA, January, 2010.
132. The Use of Capillary Electrophoresis in Microfluidic Chips. Ortega, M.; Gaspar, A.; Gomez, F. A. 22nd Annual CSUPERB Symposium, Oakland, CA, January, 2010.
133. Development of Monoliths in Capillary and Microfluidic Lab-on-a-Chip Platforms for Microassays and Electrophoretically-Mediated Microanalysis. Gutierrez, M. K.; Salgado, M.; Walsh, Z.; Macka, M.; Gomez, F. A. 22nd Annual CSUPERB Symposium, Oakland, CA, January, 2010.
134. Collaborative Research: US-Brazil IRES, Development and Applications of Microfluidic Devices. Garcia, C.; Gomez, F. A.; Carrilho, E. Latin-American Capillary Electrophoresis (LACE) Conference, Florianopolis, Brazil, December, 2010.
135. Direct and Competitive Binding Assays on Microfluidic Platforms. Wat, A.; Gomez, F. A. 2011 Emerging Researchers National (ERN) Conference in STEM, Washington, DC, February, 2011.
136. Implementation of Hybrid Neural Network Methodology in Optimizing Fluorescence from Receptor-Ligand Binding Interactions on Microchip. Alvarado, J. E.; Hanrahan, G.; Gomez, F. A. 43rd American Chemical Society Western Regional Meeting, Pasadena, CA, November, 2011.
137. Immobilization of ssDNA-SWCNT on Au microchips for the Detection of Serotonin. Melendez, J. L.; Jurado, J.; Carrilho, E.; Gomez, F. A. 43rd American Chemical Society Western Regional Meeting, Pasadena, CA, November, 2011.
138. Melamine Detection with Gold Nanoparticles (AuNPs) on mPADs using C4D. Salgado, M.; Funes, M.; Segato, T. P.; Carrilho, E.; Gomez, F. A. 43rd American Chemical Society Western Regional Meeting, Pasadena, CA, November, 2011.
139. Design and Development of a Novel Microfluidic Direct Methanol Fuel Cell. Alvarado, J.; Botoaca, D. T.; Wat, A.; Gomez, F. A. 43rd American Chemical Society Western Regional Meeting, Pasadena, CA, November, 2011.
140. Use of Magnetic Beads to Study the Interaction of Glycopeptide Antibiotics with Peptides and Bacteria. Ohan, J. A.; Clarke, K.; Xu, H. H.; Gomez, F. A. 43rd Western Regional Meeting American Chemical Society, Pasadena, CA, November, 2011.
141. Novel Microfluidic Device to Study Cytotoxicity Under a Magnesium Ion Gradient. Carmona, H.; Venkataraman, G.; Yun, Y.; Collins, B.; Gomez, F. A. 43rd Western Regional Meeting American Chemical Society, Pasadena, CA, November, 2011.
142. Novel Microfluidic Device to Study Cytotoxicity Under a Magnesium Ion Gradient. Carmona, H.; Venkataraman, G.; Yun, Y.; Collins, B.; Gomez, F. A. Development of Microfluidic-based Platforms for Diversified Analysis of Chemical Species. Gomez, F. A. 238th American Chemical Society National Meeting, San Diego, CA, March, 2012.
143. Design and Development of a Novel Microfluidic Direct Methanol Fuel Cell. Alvarado, J.; Wat, A.; Tohid, U.; Pacheco-Vega, A.; Botoaca, D. T.; Gomez, F. A. 238th American Chemical Society National Meeting, San Diego, CA, March, 2012.
144. Implementation of a Hybrid Neural Network Methodology in Optimizing Fluorescence in Receptor-Ligand Binding Interactions and Enzyme-Catalyzed Reactions in Microchips. Alvarado, J. E.; Gonzalez, L.; Valadez, H.; Hanrahan, G.; Gomez, F. A. 238th American Chemical Society National Meeting, San Diego, CA, March, 2012.
145. Novel Strategy for Integration of Micro-Extraction Columns in Centrifugal Microfluidic Platforms. Vazquez, M.; Padovani, R.; Duffy, E.; Gorkin, R.; Alvarado, J. Gomez, F. A. Ducree, J.; Brabazon, D.; Paull, B. 36th ISCC Meeting, Riva del Garda, Italy, May, 2012.

146. Detection of Antibiotics Using ssDNA Immobilized on Single Walled Carbon Nanotubes Modified with Sb Nanoparticles. Ohan, J.; Carrilho, E.; Silva, T. A.; Gomez, F. A. 25th Annual CSUPERB Symposium, Anaheim, CA, January, 2013.
147. Development of Microfluidic-Based Assays for the Detection of the Bone Turnover Marker Osteocalcin. Carmona, H.; Valadez, H.; Yun, Y.; Collins, B.; Gomez, F. A.; Sankar, J. Development of Microfluidic-based Platforms for Diversified Analysis of Chemical Species. Gomez, F. A. 25th Annual CSUPERB Symposium, Anaheim, CA, January, 2013.
148. Detection of Antibiotics Using HS-ssDNA Immobilized on swCNT Modified with Sb Nanoparticles on a Au Electrode. Ohan, J.; Silva, T. A.; Cesarino, V.; Carrilho, E.; Gomez, F. A. ACS Southern California Undergraduate Research Conference, Claremont, CA, April, 2013.
149. Design and Development of a Novel Microfluidic Direct Methanol Fuel Cell. Arrastia, M.; Alvarado, J.; Sanchez, L.; Gomez, F. A. ACS Southern California Undergraduate Research Conference, Claremont, CA, April, 2013.

Contributed Activities

1. Workshop coordinator, Obtaining a Faculty/Postdoc Position. Society for Advancement of Chicanos and Native Americans in Science National Conference, El Paso, TX, January, 1995.
2. Invited keynote speaker, From Molecular Recognition to Chicano/Latino Recognition in the Sciences: A Discourse in Not-too Extremes. American Chemical Society Awards Banquet South Florida Section, Florida International University, Miami, FL, March, 1995.
3. Invited speaker, Discipline in the Physical and Mathematical Sciences. The 5th Annual California Minority Graduate Education Forum, Long Beach, CA, April, 1995.
4. Hanging in There: Being a New Kid at the Undergraduate Institution. Gomez, F. A. 209th American Chemical Society National Meeting, Anaheim, CA, April 1995.
5. Invited speaker, How Mentoring Can Help Your Career. The 210th American Chemical Society National Meeting, Chicago, IL, August, 1995.
6. Invited speaker, Sponsoring Minority Scientists: University-based Efforts to Create Partnerships with the Pharmaceutical and Biomedical Industries. Fostering Diversity in the Scientific Workforce in the Pharmaceutical and Biomedical Industries, American Association for the Advancement of Science, Washington, D.C., October, 1995.
7. Workshop coordinator, The Role of Science and Technology in the Future Socioeconomic Status of California's Chicano/Latino Community. California Chicano/Latino Intersegmental Convocation, San Francisco, CA, November, 1995.
8. Invited speaker, Minority Representation in Industry and Higher Education. The 212th American Chemical Society National Meeting, Orlando, FL, August, 1996.
9. Conference Chair, Society for Advancement of Chicanos and Native-Americans in Science National Conference, Los Angeles, CA, October, 1996.
10. Mentoring Minority Students: The Society for Advancement of Chicanos and Native Americans in Science (SACNAS). 213th American Chemical Society National Meeting, San Francisco, CA, April, 1997.
11. Invited speaker, Latino Scholastic Achievement Corporation, California Institute of Technology, Pasadena, CA, February, 1998.
12. Chemical Sciences Symposium Chair, Society for Advancement of Chicanos and Native-Americans in Science National Conference, Washington D.C., October, 1998.
13. Invited speaker, Latino Scholastic Achievement Corporation, Pomona College, Pasadena, CA, February, 1999.
14. Invited speaker, Achieving Graduate Student Diversity Conference, University of California, Los Angeles, CA, November, 1999.
15. Invited speaker, The East Los Angeles Community Union (TELACU) Leadership Conference, City of Commerce, CA, March, 2000.
16. Invited speaker, Latino Scholastic Achievement Corporation Latina Conference, Industry Hills, CA, March, 2000.
17. Commencement speaker, Don Bosco Technical Institute, Rosemead, CA, June 2000.
18. Invited speaker, Fasttrack to the Professoriate, University of California, Irvine, CA, August, 2000.

19. Workshop coordinator, Careers in the Sciences, College Career Conference, Bell High School, Bell, CA, October, 2000.
20. Invited speaker, The East Los Angeles Community Union (TELACU) Leadership Conference, City of Commerce, CA, March, 2001.
21. Invited speaker, Algebra in the Real World Teacher Conference, Montebello, CA, May, 2001.
22. Speaker, Department of Defense, 2009 Minority Serving Institutions (MSI) Technical Assistance Workshop, Cal Poly Pomona, May, 2009.
23. Invited speaker, The Economic Status of the City of Montebello, Society of Auditor Assessors, Rosemead, CA, March, 2012.
24. Invited speaker, The Socioeconomics of the Los Angeles Region, the Rotary Club, June, 2012.

Newspaper/Magazine Articles

1. "Board Member Dispels Superintendent Rumors"; The Los Angeles Times (Our Times), April 1, 1999.
2. "School Board Election Has No Place for Politics"; The Los Angeles Times (Our Times), October 21, 1999.
3. "MUSD Goes Against Tradition: Elects Board Officers Out of Normal Rotation"; The Montebello Comet, December 9, 1999.
4. "School Board Needs to Refocus on Children"; The Los Angeles Times (Our Times), December 9, 1999.
5. "Putting Our Children's Education First: What Does Politics Have to do With Educating Our Children?"; The Los Angeles Times (Our Times), April 13, 2000.
6. "A Rebuttal to an Educator's Letter"; The Los Angeles Times (Our Times) and The Montebello Comet, May 4, 2000.
7. "Once a Teacher, Always a Teacher"; The Los Angeles Times (Our Times) and The Montebello Comet, June 29, 2000.
8. "Time to Reflect on Our Accomplishments"; The Montebello Comet, July 13, 2000 and The Los Angeles Times (Our Times), July 20, 2000.
9. "Education Makes a World of Difference"; The Montebello Comet, August 17, 2000.
10. "How to Use the Stanford 9 Standardized Test Constructively"; The Los Angeles Times (Our Times), August 24, 2000.
11. "Special Education Receives a Boost in Funding"; The Montebello Comet, November 16, 2000.
12. "Summer College Experiences Show Students the Way to Success"; The Montebello Comet, June 14, 2001.
13. "Reflecting on Our Accomplishments"; The Montebello Comet, July 19 and 26, 2001.
14. "Vouchers and Our Children"; The Montebello Comet, August 1, 2002 and Whittier Daily News, August 5, 2002.
15. "Under Bush, Science and Technology, Politics are at Odds"; San Gabriel Valley Tribune, Whittier Daily News, Pasadena Star News, April 3, 2003.