Curriculum Vitae

Binghe Wang (王炳和)

Current position: Professor of Chemistry, Georgia Research Alliance Eminent Scholar in Drug Discovery, and Georgia Cancer Coalition Distinguished Cancer Scientist

Office
Department of Chemistry
Georgia State University
P.O. Box 4098
Atlanta, GA 30302-4098
Phone (404) 413-5544 (direct),
404-413-5526 (Assistant), (404-413-5545 (lab)
Fax (404) 413-5543
E-Mail wang@gsu.edu
Web site: http://chemistry.gsu.edu/faculty/Wang/Wang.html

Personal

Citizenship: USA

Education

Ph.D. May 1991, Department of Medicinal Chemistry, School of Pharmacy, University of Kansas.

B.S. July 1982, Department of Medicinal Chemistry, College of Pharmacy, Beijing Medical University, Beijing, China.

Research Interests

1) Organic/Medicinal chemistry: Design and synthesis of new imaging and therapeutic agents targeted on cancer and microbial pathogens; drug delivery

2) Bioorganic chemistry/molecular recognition: Development of fluorescent sensors for the recognition and analysis of molecules of biological importance

Experiences

July 2003-present	Professor, Georgia Research Alliance Eminent Scholar, Georgia Cancer Coalition Distinguished Cancer Scientist, Department of Chemistry, Georgia State University
2003-present:	Member, Center for Drug Discovery, University of Georgia.
June 2000-June 2003:	Associate Professor with tenure, Department of Chemistry, North Carolina State University

August 1998-June 2003	Genomic Science Faculty and Biotech faculty, North Carolina State University
August 1996 to June 2000	Assistant Professor, Department of Chemistry, North Carolina State University
January 1994 to July 1996	Assistant Professor, Department of Medicinal Chemistry and Pharmaceutics, College of Pharmacy, University of Oklahoma Health Sciences Center
August 1992 to Dec. 1993	Post-doctoral research associate with Professor Ronald T. Borchardt, Department of Pharmaceutical Chemistry, School of Pharmacy, University of Kansas
January 1992 to July 1992	Post-Doctoral research associate with Professor Victor J. Hruby, Department of Chemistry, University of Arizona
May 1991 to Dec. 1991	Post-doctoral research associate with Professor Kristin Bowman-James, Department of Chemistry, University of Kansas
August 1985-May 1991	Graduate research assistant with the late Professor Mathias P. Mertes and Professor Kristin Bowman-James, Department of Medicinal Chemistry, School of Pharmacy, University of Kansas
August 1984-August 1985	Graduate Teaching and Research Assistant, Department of Chemistry, University of British Columbia, Vancouver, Canada
August 1982-July 1984	Research Assistant, Department of Medicinal Chemistry, Institute of Materia Medica, Chinese Academy of Medical Sciences, Beijing, China

Honors, Awards, and Recognitions

1) Editor-in-Chief, *Medicinal Research Reviews*, since January 1, 2001 (Impact factor: 8.92, ranked #1 among all medicinal chemistry journals worldwide)

2) Book Series Editor, "Wiley Series in Drug Discovery and Development," since 2004.

3) Distinguished Alumni Professor Award, Georgia State University, 2007

4) Outstanding Faculty Scholarship Award, Georgia State University College of Arts and Sciences, 2007

5) Member of Editorial Advisory Board, Chemical Biology and Drug Design (Formerly *J. Peptide Res.)*, Since June 2005

6) Harris Distinguished Lecturer, September 6, 2007, University of Oklahoma College of Pharmacy.

7) Member of External Advisory Board, Center for Cancer Research and Therapeutic Development (CCRTD)/RCMI (Research Center in Minority Institutions), Clark Atlanta University, Atlanta, GA, since 2005.

8) Member of Advisory Review Committee, Georgia Cancer Coalition, 2005-2008.

9) Member of Editorial Advisory Board, Letters in Drug Design & Discovery, September 2002-2008.

10) Member of Editorial Board, *J. Chinese Pham. Sci.,* since 2007.

11) Member of Editorial Board, *Acta Pharmaceutica Sinica*, since 2005.

12) Scientific Advisory Board, National Key Lab of Natural and Biomimetic Drugs, Beijing University, Beijing, China, since 2005.

13) Chang-Jiang Lecture Professor, Shandong University College of Pharmacy, Since 2007-2010

14) Chunhui Guest Professorship, Lanzhou University, Lanzhou, China, since 2005.

14) Member of Editorial Advisory Board, *Current Medicinal Chemistry*, June 1999-June 2002.

15) Member, Long-rang Planning Committee, American Chemical Society, Division of Medicinal Chemistry, 2002-2004.

16) Established Investigator Award, American Heart Association, 1998.

17) FIRST Award, National Institutes of Health, 1995.

18) Oklahoma Society of Hospital Pharmacists Outstanding Faculty Award, 1995-1996 (for teaching).

19) Kappa Psi Outstanding Faculty Award, College of Pharmacy, University of Oklahoma Health Sciences Center, 1995-1996 (for teaching).

20) Kappa Epsilon Outstanding Faculty Award, College of Pharmacy, University of Oklahoma Health Sciences Center, 1995-1996 (for teaching).

21) Chairman, American Chemical Society, Oklahoma Section, 1995.

22) Graduation with Honors, Ph.D., May 1991, University of Kansas.

23) Irsay-Dahle award for outstanding graduate student, Department of Medicinal Chemistry, University of Kansas, October 1990.

24) National Fellowship for Studying Abroad, Ministry of Education, China, 1984.

25) Honor student, May 1982, School of Pharmacy, Beijing Medical University.

Seminars and Other Invited Presentations

1) 1995 Conference on Pharmaceutical Science and Technology: Symposium on Drug Delivery Systems August 22-25, 1995, Chicago, Illinois.

2) Chiron Diagnostics, Corp.; East Walpole, MA, August 11, 1997.

3) Sarco, Inc.; Durham, NC, February 9, 1998.

4) Antisense and Gene Therapy Discussion Group, School of Medicine, University of North Carolina, Chapel Hill, April 23, 1998.

5) Virginia Commonwealth University College of Pharmacy, Richmond, VA, October 2, 1998.

6) Research Triangle Institute, Durham, NC, December 10, 1998.

7) Department of Chemistry, University of Alabama, Birmingham, Alabama, January 8, 1999

8) Department of Chemistry, East Carolina University, Greenville, North Carolina, January 29, 1999

9) Department of Chemistry, Georgetown University, Washington DC, February 17, 1999

10) Department of Chemistry, University of Maryland, College Park, MD, February 18, 1999.

11) Department of Chemistry and Biochemistry, University of Delaware, Newark, DE, February, 19, 1999.

12) Neuropharmacology Laboratory, National Institute of Environmental Health Sciences, February 27, 1999.

13) Department of Chemistry, University of Missouri, Columbia, MO, March 10, 1999.

14) University of Kansas, Lawrence, KS, March 11, 1999.

15) Department of Biology, North Carolina Central University, Durham, NC, March 26, 1999.

16) University of North Carolina at Pembroke, February 1, 2000.

17) College of Pharmacy, University of Illinois at Chicago, April 14, 2000.

18) North China Pharmaceutical Group, Inc., Shijiazhuang, China, May 29, 2000.

19) Beijing Medical University, School of Pharmaceutical Sciences, Beijing, China, May 31, 2000.

20) Institute of Materia Medica, Chinese Academy of Medical Sciences, Beijing, China, June 1, 2000.

21) Beijing Institute of Pharmacology and Toxicology, Beijing, China, June 2, 2000.

22) Department of Chemistry, Peking University, Beijing, China, June 2, 2000.

23) Peking University Health Sciences Center, Beijing, China, June 13, 2001.

24) Shanghai Institute of Materia Medica, China, June 14, 2001.

25) Institute of Materia Medica, Chinese Academy of Medical Sciences, Beijing, China, June 18, 2001.

26) College of Pharmacy, University of North Carolina, Chapel Hill, November 15, 2001.

27) Department of Chemistry, Wayne State University, Detroit MI, December 12, 2001.

28) Sensors for Medicine and Sciences, Germantown, MD, May 8, 2002.

29) The 28th National Medicinal Chemistry Symposium, San Diego, CA, June 8-12, 2002.

30) Department of Chemistry and Biochemistry, Georgia State University, Atlanta GA, September 6, 2002.

31) College of Pharmacy, Campbell University, Buies Creek, NC, September 20, 2002.

32) BD Technologies, RTP, NC, February 11, 2003.

33) CIBA Vision, Duluth, GA, March 10, 2003.

34) Department of Chemistry, Tulane University, March 31, 2003.

35) College of Pharmacy, Rutgers University, May 22, 2003.

36) Department of Chemistry, Texas A&M University, September 25, 2003

37) Department of Chemistry, Purdue University, October 9, 2003

38) Department of Chemistry and Biochemistry, Utah State University, November 12, 2003

39) Young Supramolecular Chemists Workshop, Sanibel, Fl, January 10-14, 2004.

40) Department of Chemistry and Biochemistry, Auburn University, February 19, 2004

41) Department of Chemistry, University of Virginia, March 5, 2004.

42) Georgia Cancer Coalition Cancer Research Conference (Drug Discovery session) at Chateau Elan Resort, May 6-7, 2004

43) Department of Chemistry, and Complex Carbohydrate Research Center, University of Georgia, September 30, 2004

44) Enplas Lecture, Kennesaw State University, October 12, 2004

45) Department of Biology, Clark Atlanta University, October 29, 2004

46) Institute of Materia Medica, Chinese Academy of Medical Sciences, May 31, 2005.

47) Department of Chemistry, Sichuan University, China, June 7, 2005

48) Department of Chemistry, Lanzhou University, Lanzhou, China, June 9, 2005

49) Frontiers of Organic and Bioorganic Chemistry (The first Sino-US Chemistry Professors Conference), June 13, 2005, Tianjin, China

50) Carbohydrate Gordon Conferences, Tilton, NH, June 19-24, 2005

51) Emory University Winship Cancer Center-Brain Cancer Group, August 24, 2005.

52) Emory University Winship Cancer Center Elkin Lecture series, September 16, 2005

53) Georgia Cancer Summit, Atlanta, GA, November 3, 2005.

54) A symposium on "Chemical Sensors, Biosensors and Sensing Technologies" at Pacifichem 2005, December 15-20, 2005, Hawaii.

55) Augusta State University, Keynote lecture, 7th Phi Kappa Phi Students Research and Fine Arts Conference, March 15, 2006

56) Symposium on Carbohydrate Recognitions at the 231st American Chemical Society Meeting, Atlanta, Georgia, March 26-30, 2006.

57) Department of Chemistry, University of Alberta, Canada, May 23, 2006.

58) Department of Chemistry, University of Washington, Seattle, Washington, May 25, 2006.

59) Department of Medicinal Chemistry, University of Kansas, June 12, 2006

60) Frontiers of Organic and Bioorganic Chemistry (The 2nd Sino-US Chemistry Professors Conference), July 8-9, 2006, Shanghai, China

61) Lanzhou International Symposium on Organic an Medicinal Chemistry, July 10-11, 2006, Lanzhou, China

62) School of Pharmacy, Shandong University, Jinan, China, July 18, 2006

63) IMAT Symposium, NCI, September 7-8, 2006, Washington, DC.

64) Department of Chemistry, Louisiana State University, September 15, 2006

65) College of Pharmacy, University of Georgia, October 16, 2006

66) The Fifth Chinese Medicinal Chemistry Symposium, November 3-7, 2006, Nanjing, China

67) Valdosta State University and ACS-South Georgia Section, November 27, 2006

68) Department of Chemistry, State University of New York-Buffalo, December 8, 2006

69) Department of Chemistry, University of South Florida, Tampa, Florida, Jan 11, 2007

70) World Precisions, Sarasota, Florida, Jan 12, 2007

71) The 3rd Sino-US Chemistry Professors Conference, Wuhan, China, June 1-2, 2007

72) Beijing University Health Sciences Center, College of Pharmaceutical Sciences, June 7, 2007

73) Shandong University College of Pharmacy, Shandong, China, June 13, 2007

74) Department of Biology, Georgia State University, Atlanta, Georgia, July 13, 2007

75) Welch Allyn, Skaneateles Falls, NY, August 16, 2007

76) Department of Chemistry, University of New Orleans, August 31, 2007

77) University of Oklahoma, College of Pharmacy Distinguished Lecture Series, September 5, 2007

78) College of Pharmacy, Matt Mertes Memorial Symposium, October 29, 2007

79) Rega Institute for Medical Research, Minderbroedersstraat 10, Leuven, Belgium, November 14, 2007

80) Carlsberg Laboratories, Copenhagen, Denmark, November 16, 2007

81) Department of Cellular Biology, University of Georgia, November 27, 2007

82) Department of Chemistry, Portland State University, Portland, Oregon, February 22, 2008

83) 16th Annual Suddath Symposium, March 7-8, 2008, Georgia Institute of Technology

84) Department of Chemistry, University of California-Davis, March 27, 2008

85) Dipartimento di Chimica, University of Florence, April 7, 2008

86) Department of Chemistry, University of Southern Mississippi, April 18, 2008

87) The 2008 Research Symposium of the Georgia Cancer Coalition, Lake Oconee, May 11-12, 2008

88) Nucleic Acid Club of Atlanta meeting, May 22, 2008

89) College of Pharmacy, China Pharmaceutical University, June 3, 2008

90) College of Pharmacy, Shandong University, June 6, 2008

91) The Fourth Annual Sino-US Chemistry Professors Conference, Beijing, China, June 12-13, 2008

92) Joint International Symposium on Macrocyclic & Supramolecular Chemistry, Las Vegas, July 13-18, 2008

93) Biotechnology Symposium Honoring Roy Doi, Georgia State University, August 14, 2008

94) Department of Chemistry, University of New Mexico, August 29, 2008.

95) Department of Medicinal Chemistry, University of Minnesota, September 15, 2008

96) Department of Chemistry, Virginia Tech, September 26, 2008

97) The 4th Carbohydrate and Glycobiology Symposium, October 3-4, 2008

98) College of Pharmacy, Fudan University, October 8, 2008

99) College of Chemistry and Chemical Engineering, Lanzhou University, October 10, 2008

100) College of Chemistry, Xiamen University, October 13, 2008

101) Ninth Principal Investigators (PI) Meeting for the Innovative Molecular Analysis Technologies (IMAT) Program, Boston, October 27, 2008

102) Anacor Pharmaceutical s, Inc., Palo Alto, CA, November 21, 2008

103) NIH-NIGMS Glycan Array workshop, December 8, 2008

104) Johns Hopkins University High Throughput Screening Center, December 9, 2008

105) Glycobiology Gordon Conference, Ventura, CA, Jan. 18-23, 2009

106) Glycan Microarray Technologies and Applications, Hilton La Jolla, California, March 14-16, 2009

107) Symposium on "*Synthetic Carbohydrate Receptor: Design and Applications"* at 237th ACS National Meeting, March 22-26, 2009

108) Symposium on "*Carbohydrate Sensors: Recent Developments and Applications"* at 237th ACS National Meeting, March 22-26, 2009

109) Discovery and Developmental Therapeutics Retreat (Emory), Evergreen Marriott Conference Resort in Stone Mountain, Georgia, June 5-6

110) 5th Sino-US Chemistry Professors Conference, Lanzhou, China, June 28-30, 2009

Currently Active Research Funding

1) Developing New Cancer Therapies and Diagnostics, Georgia Cancer Coalition, July 1, 2003-June 30, 2010.

2) Fluorescent Aptamers for Glycoprotein Detection, PI, NIH (CA113917), 7/1/05-6/30/09

3) Biomarker-based MRI Contrast Agents, PI, NIH (CA123329), 9/20/2006-8/31/2010.

4) Development of Novel Small Molecules for Malignant Brain Tumor, Sub-contract PI (PI: Erwin Van Meir, Emory), NIH (CA122536), 9/1/2007-3/31/2012

5) Phosphodiesterase inhibitors as trypanocidal therapeutics, Co-PI with Roberto Docampo of UGA) Georgia Research Alliance, 7/1/2008-6/30/2009

6) Selection of Boronic Acid-modified Aptamers for Glycoproteins, PI, NIH (GM084933), 9/1/08-8/31/2012

7) Minority Supplement for Suazette Reid, preceptor, NIH, 9/1/08-8/31/2011,

8) Aptamer-based Glyco-tools, PI, NIH (STTR, R42GM086925), 4/1/09-11/30/2012

Past Research Funding

1) Inhibitors of 5-Enolpyruvylshikimate-3-phosphate Synthase and Chorismate Synthase, PI, Oklahoma Center for the Advancement of Science and Technology, $87,344 (direct cost only), September 1, 1994-August 31, 1997 (Third year declined).

2) NMR Spectrometer (300 MHz), PI, NIH, $197,300 (direct cost only), April 1, 1996 - March 31, 1997 (Funded, but transferred PI position to Garo Basmadjian because of my move from University of Oklahoma to North Carolina State University.).

3) Cyclic Prodrugs of RGD Analogs, PI, American Heart Association, Oklahoma Affiliate, $95,700 (including 10% indirect cost), July 1, 1996-June 30, 1999 (Funded, but declined).

4) Coumarin-Based Cyclic Prodrugs of Opioid Peptides, PI, Presbyterian Health Foundation (#987), $24,950 (direct cost only), April 1, 1995-March 31, 1996.

5) Acquisition of Instrumentation for an Oklahoma Statewide Shared NMR Facility, Co-Investigator (PI: Warren Ford of Oklahoma State University, Total Number of Investigators: 13 from The University of Oklahoma, Oklahoma State University, and The University of Oklahoma Health Sciences Center), NSF: $535,000 (direct cost only); Oklahoma State Regents for Higher Education Competitive Challenge Grant: $500,000 (direct cost only); Educational Research Foundation: $300,000 (direct cost only), September 1, 1995 - August 31, 1996 (all funded).

6) Cyclic Prodrugs of Opioid Peptides, Co-PI (PI: Ronald T. Borchardt of University of Kansas), NIDA, $425,065, July 1, 1995-June 30, 1998.

7) Glaxo Graduate Fellowship, $16,000, Preceptor (Recipient: Wei Wang), 1998-1999.

8) Wellcome Graduate Fellowship, $16,000, Preceptor (Recipient: Eric Ballard), 1998-1999.

9) Research Experiences for Undergraduates, Co-Investigator/preceptor (PI: James D. Martin), NSF (CHE-9610196), $180,339, May 1997-April 2000.

10) Thrombus-specific MRI Contrast Agents, PI (Co-PI: David Sane), North Carolina Biotechnology Center (98005-ARG-0008), $40,000 (direct cost only), August 1, 1998-July 31, 2000.

11) Glucose-sensitive Artificial Receptors for Insulin, PI, NIH (NIDDK, DK55062), $197,749, September 30, 1998-September 29, 2000.

11) NMR Spectrometer (400 MHz), PI, NIH (S10RR14731), $330,000, April 1, 2001-March 31, 2002 (Funded but declined because an overlapping application submitted to the NSF by the Chemistry Department was also funded and the Department decided to accept the NSF one).

12) Wellcome Graduate Fellowship, Preceptor (Recipient: Weijuan Ni), $18,000, 2000-2001.

13) Application of Two Facile Cyclization Systems, PI, NIH (NIGMS, GM52515), $500,000, April 1, 1995-July 31, 2001.

14) Neuroprotective Apolipoprotein-E Analogs, Collaborator (PI: Mike Vitek), NIH-SBIR (phase 1), $181,236.

15) Esterase-Sensitive Prodrugs of Tirofiban, Lamifiban, and Xemilofiban, PI, American Heart Association (National, #9740117N), $291,620, July 1, 1998-June 30, 2003.

16) Gated Carbon Nanotubes, PI, North Carolina Biotechnology Center (2001ARG0016), $55,000, August 1, 2001-July 1, 2003.

17) Biotechnology Training at North Carolina State University, Participant/preceptor (PI: Bob Kelly), NIH, $1,370,894, July 1, 2000-June 30, 2005.

18) Fluorescent Tags Targeted on Cell Surface Carbohydrates, PI, NIH (CA88343), $889,951, July 1, 2000-June 30, 2005.

19) Boronic Acid-based Sensors for Cell-surface Carbohydrates, PI, NIH (NO1-CO-27184), $1,556,839, 3/1/02-2/28/05.

20) Small-molecule Inhibitors of DNA Repair as Radiosensitizers, Co-PI with Bill Dynan of Medical College of Georgia, Georgia Research Alliance, $50,000 (Wang's portion $25,000), 7/1/04-6/30/05

21) PDE4 Inhibitor Studies, Co-PI with Jim Prestegard of the University of Georgia, Georgia Research Alliance (GRA.CG06.E), $50,000 (Wang's portion $25,000), 7/1/05-6/30/06

22) Identification and Synthesis of Sea Hare Defensive Compounds, Co-PI with Chuck Derby, Brains and Behavior Research Program, GSU-Internal, $25,444 (Wang's Portion: $16,444), 9/1/2005-8/31/2006.

23) Inhibitor of DAM Virulence Factor in Enteropathogenic *Escherichia coli*, CO-PI with Xiaodong Chen of Emory University, Georgia Research Alliance, $50,000 (Wang's portion $25,000), 7/1/06-6/30/07

24) Small-molecule Inhibitors of DNA Repair as Radiosensitizers, Co-PI with Bill Dynan of Medical College of Georgia, Georgia Research Alliance, $50,000 (Wang's portion $25,000), 7/1/05-6/30/07

25) Inhibitors of Bacterial Urease as Potential Antimicrobial Agents, Co-PI with Robert Maier of the University of Georgia, Georgia Research Alliance, $50,000 (Wang's portion $25,000), 7/1/06-6/30/07

26) Inhibitors of Bacterial Urease as Potential Antimicrobial Agents, Co-PI with Robert Maier of the University of Georgia, Georgia Research Alliance, $50,000 (Wang's portion $25,000), 7/1/07-6/30/08

27) Phosphodiesterases as therapeutic targets in Chagas' disease, Co-PI with Roberto Decampo of the University of Georgia, Georgia Research Alliance, $50,000, 7/1/07-6/30/08

28) Immunopathogenic Role of Infectious Agents in Neurological Disorders, Co-PI with Robert Yu (Medical College of Georgia), Georgia Research Alliance, $100,000 (Wang's portion: $40,000), 8/1/07-7/1/08

Courses Taught

1) Medicinal Chemistry I & II (Pharmacy students, College of Pharmacy, University of Oklahoma)

2) Biotechnology (Graduate students, College of Pharmacy, University of Oklahoma)

3) Organic Chemistry I and II (Undergraduates, North Carolina State University)

4) Advance Organic Chemistry Lab (Undergraduates, North Carolina State University)

5) Bioorganic Chemistry (Graduate, North Carolina State University)

6) Advanced Organic Chemistry (Graduate, Georgia State University)

7) Medicinal Chemistry (Graduate, Georgia State University)

Publications

1) Wang, B.; Kagel, J.R.; Rao, T.S.; Mertes, M.P. "A Novel Cyclization Reaction of a C6 Substituted Uridine Analog: An Entry to 5,6-Dialkylated Uridine Derivatives" *Tetrahedron Lett.* **1989**, *30*, 7005-7008.

2) Wang, B.; Mertes, M.P.; Mertes, K.B.; Takusagawa, F. "A Novel Intramolecular 1,3-Dipolar Cycloaddition Reaction of a C6 Substituted Uridine Analog" *Tetrahedron Lett.* **1990**, *31*, 5543-5546.

3) Bencini, A.; Bianchi, A.; Garcia-Espana, E.; Scott, E.; Morales, L.; Wang, B.; Deffo, T.; Mertes, M.P.; Mertes, K.B.; Paoletti, P. "Potential ATPase Mimics by Polyammonium Macrocycles: Criteria for Catalytic Activity" *Bioorganic Chemistry* **1992**, 8-29.

4) Wang, B.; Takusagawa, F.; Mertes. M.P.; Bowman-James, K. "Structure of the Product from a Novel Cyclization Reaction Involving a C6-Substituted Uridine Analog, C25H31N3O6" *Acta Crystallographica Section C 49* **1993**, 1568-1571.

5) Kagel, J.R.; Wang, B.; Mertes, M.P. "Synthesis and Evaluation of a Chemical Probe for the Mechanism of Thymidylate Synthase" *J. Org. Chem.* **1993**, *58*, 2738-2746.

6) Wang, B.; Kagel, J.; Mertes, M.P.; Bowman-James, K. "Insight into the Chemical Mechanism of Thymidylate Synthase Catalyzed Reaction through the Evaluation of Chemical Models: The Role of C6 Sulfhydryl Addition during the Reductive Elimination Step of the Reaction" *Bioorganic Chemistry* **1994**, *22*, 405-420.

7) Wang, B.; Liu, S.; Borchardt, R.T. "A Novel Redox-Sensitive Protecting Group for Amines Which Utilizes a Facilitated Lactonization Reaction" *J. Org. Chem.* **1995**, *60*, 539-543.

8) Wang, B.; Nicolaou, M.; Liu, S.; Borchardt, R.T. "Structural Analysis of a Facile Lactonization System Facilitated by a "Trimethyl Lock"" *Bioorganic Chemistry* **1996**, *24*, 39-49.

9) Liu, S.; Wang, B.; Nicolaou, M.; Borchardt, R.T. "Trimethyl Lock Facilitated Spirocyclizations. A Structural Analysis" *J. Chem. Crystallography* **1996**, *26*, 209-214.

10) Wang, B.; Zhang, H.; Wang, W. "Chemical Feasibility Studies of a Coumarin-Based Prodrug System" *Bioorg. Med. Chem. Lett.* **1996**, *6*, 945-950.

11) Wang, B.; Zhang, H.; Shan, D.; Wang, W. "Coumarin-Based Prodrugs 2. Synthesis and Bioreversibility Studies of an Esterase-Sensitive Cyclic Prodrug of DADLE, an Opioid Peptides" *Bioorg. Med. Chem. Lett.* **1996**, *6*, 2823-2826.

12) Gangwar, S.; Pauletti, G.; Wang. B.; Siahaan, T; Stella, V.J.; Borchardt, R.T. "Novel Esterase-Sensitive Cyclic Prodrugs of a Model Hexapeptide Having Enhanced Membrane Permeability and Enzymatic Stability." *Proceedings of the 14th International Symposium for Medicinal Chemistry* **1997**, 27-34, F. Awouters, Ed. Elsevier Science, B.V., Amsterdam, The Netherlands.

13) Gangwar, S.; Pauletti, G.M.; Wang, B.; Siahaan, T.J.; Stella, V.J.; Borchardt, R.T. "Prodrug Strategies to Enhance the Intestinal Absorption of peptides" Drug Discovery Today, **1997**, 4, 148-155.

14) Pauletti, G.M.; Gangwar, S.; Wang, B.; Borchardt, R.T. "Esterase-Sensitive Cyclic Prodrugs of Peptides: Evaluation of a Phenylpropionic Acid Promoiety in a Model Hexapeptide" *Pharm. Res.* **1997**, *14*, 11-17.

15) Wang, B.; Gangwar, S.; Pauletti, G.M.; Siahaan, T.J.; Borchardt, R.T. "Synthesis of a Novel Esterase-Sensitive Cyclic Prodrug System for Peptides that Utilizes a "Trimethyl Lock"-Facilitated Lactonization Reaction" *J. Org. Chem.* **1997**, *62*, 1363-1367.

16) Borchardt, R.T.; Siahaan, T.; Gangwar, S.; Stella, V.J.; Wang, B. Preparation of Cyclic Prodrugs of Peptides and Peptide Nucleic Acids Having Improved Metabolic Stability and Cell Membrane Permeability. U.S. Patent **1997**, US5672584

17) Wang, B.; Zheng, A. "A Photosensitive Protecting Group for Amines" *Chem. Pharm. Bull.* **1997**, *45*, 715-718.

18) Madler, M.M.; Benbrook, D.M.; Birckbichler, P.J.; Nelson, E.C. Subramanian, S.; Weerasekare, G.M.; Gale, J.B.; Patterson, Jr, M.K.; Wang, B.; Wang, W.; Lu, S.; Rowland, T.C.; DiSivestio, P.; Berlin, K.D. "Biologically Active Heteroarotinoids-Potential Anticancer Agents" *J. Med. Chem.* **1997**, *40*, 3567-3583.

19) Shan, D.; Nicolaou, M.; Borchardt, R.; Wang, B. "Prodrug Strategies Based on Intramolecular Cyclization Reactions" *J. Pharm. Sci.* **1997**, *86*, 765-767.

20) Wang. B.; Gangwar, S.; Pauletti, G.; Siahaan, T; Borchardt, R.T. "Synthesis of an Esterase-Sensitive Cyclic Prodrug of a Model Hexapeptide Having Enhanced Membrane Permeability and Enzymatic Stability Using a 3-(2'-Hydroxy-4'-6'-dimethylphenyl)-2,2-dimethyl Propionic Acid Promoiety." *Peptidomimetics Protocols, Methods in Molecular Medicine*, *Vol. 23,* Kazmierski, W.; Editor. Humana Press Inc., Totiwa, NJ. **1998**, P: 53-69.

21) Wang, B.; Zhang, H.; Zheng, A.; Wang, W. "Coumarin-Based Prodrugs 3. Structural Effects on the Release Kinetics of Esterase-Sensitive Prodrugs of Amine" *Bioorg. Med. Chem.* **1998**, *6*, 417-426.

22) Camenisch, G.; Wang, W.; Wang, B.; Borchardt, R.T. "A Comparison of the Bioconversion Rates and the Caco-2 Cell Permeation Characteristics of Coumarin-Based Cyclic Prodrugs and Methylester Linear Prodrugs of RGD Peptidomimetics" *Pharm. Res.* **1998**, *15*, 1174-1187.

23) Liao, Y.; Wang, W.; Wang, B. "Enantioselective Polymeric Transporters of D-Tryptophan, D-Phenylalanine, and D-Histidine Prepared Using Molecular Imprinting Techniques" *Bioorg. Chem.* **1998**, *26*, 309-322.

24) Wang, B.; Shan, D.; Wang, W.; Zhang, H.; Gudmundsson, O.; Borchardt, R.T. "Synthesis of Coumarin-Based, Esterase-Sensitive Cyclic Prodrugs of Opioid Peptides with Enhanced Membrane Permeability and Enzymatic Stability." *Peptidomimetics Protocols, Methods in Molecular Medicine, Vol. 23,* Kazmierski, W.; Editor. Humana Press Inc., Totiwa, NJ. **1998**, P: 71-85.

25) Gudmundsson, O.S.; Bak, A.; Wang, W.; Shan, D.; Zhang, H. Friis, G.J.; Wang, B.; Borchardt, R.T. "Prodrug Strategies to Enhance the Permeation of Opioid Peptides through the Intestinal Mucosa." *Peptide and Protein Drug Delivery,* Frokjaer, S.; Christrup, L.; Krogsgaard-Larsen, P. Eds; Munksgaard, Denmark, **1998**, P: 259-269.

26) Zhang, A.; Shan, D.; Wang, B. "A Redox-Sensitive Resin Linker for the Solid Phase Peptide Synthesis of *C*-Terminal Modified Peptides" *J. Org. Chem.* **1999**, *64*, 156-161.

27) Gudmundsson, O.S.; Pauletti, G.M.; Wang, W.; Shan, D.; Zhang, H.; Wang, B.; Borchardt, R.T. "Coumarinic Acid-Based Cyclic Prodrugs of Opioid Peptides That Exhibit Metabolic Stability to Peptidases and Excellent Cellular Permeability" *Pharm. Res.* **1999**, *16*, 7-15.

28) Wang, B.; Wang, W.; Camenisch, G.; Elmo, J.; Zhang, H.; Borchardt, R.T. "Synthesis and Evaluation of Novel Coumarin-Based Esterase-Sensitive Cyclic Prodrugs of Peptidomimetic RGD Analogs with Improved Membrane Permeability" *Chem. Pharm. Bull.* **1999**, *47*, 90-95.

29) Zheng, A.; Wang, W.; Zhang, H.; Wang, B. "Two New Approaches to the Synthesis of Coumarin-Based Prodrugs" *Tetrahedron* **1999**, *55*, 4237-4254.

30) Wang, W.; Jiang, J.; Ballard, C.E.; Wang, B. "Prodrug Approaches to the Improved Membrane Permeability of Peptides" *Current Pharmaceutical Design* **1999**, *5*, 265-287.

31) Wang, B.; Nimkar, K.; Wang, W.; Zhang, H.; Shan, D.; Gudmundsson, O.; Gangwar, S.; Siahaan, T.; Borchardt, R.T. "Synthesis and Evaluations of Esterase-Sensitive Cyclic Prodrugs of Two Opioid Peptides: [Leu^5]-Enkephalin and DADLE" *J. Peptide Res.* **1999**, *53*, 370-382.

32) Gudmundsson, O.S.; Jois, S.D.S.; Vander Velde, D.G.; Siahaan, T.J.; Wang, B.; Borchardt, R.T. "The Effect of Conformation on the Membrane Permeability of Coumarinic Acid- and Phenylpropionic Acid-based Cyclic Prodrugs of Opioid Peptides" *J. Peptide Res.* **1999**, *53*, 383-392.

33) Liao, Y.; Wang, B. "Substituted Coumarins as Esterase-sensitive Prodrug Moieties with Improved Release Rates" *Bioorg. Med. Chem. Lett.* **1999**, *9*, 1795-1800.

34) Liao, Y.; Wang, W.; Wang, B. "Building Fluorescent Sensors by Template Polymerization. The Preparation of an Enantioselective Fluorescent Sensor for L-Tryptophan" *Bioorg. Chem.* **1999**, *27*, 463-476.

35) Zheng, A.; Shan, D.; Shi, X.; Wang, B. "A Novel Resin Linker for Solid Phase Peptide Synthesis Which Can Be Cleaved Using Two Sequential Mild Reactions" *J. Org. Chem.* **1999**, *64*, 7459-7466.

36) Wang, W.; Gao, S.; Wang, B. "Building Fluorescent Sensors by Template Polymerization: The Preparation of A Fluorescent Sensor for Fructose" *Org. Lett.* **1999**, *1*, 1209-1212.

37) Wang, W.; Sane, D.C.; Camenisch, G.; Hugger, E.; Wheller, G.L.; Borchardt, R.T.; and Wang, B. "The Use of Prodrug Strategies to Optimize the Oral Absorption of RGD Peptidomimetics" *J. Controlled Release* **2000**, *65*, 245-251.

38) Shan, D.; Zheng, A.; Ballard, C.E.; Wang, W.; Borchardt, R.T.; Wang, B. "A Facilitated Cyclic Ether Formation and Its Potential Application in Solid-Phase Peptide and Organic Synthesis" *Chem. Pharm. Bull.* **2000**, *48*, 238-244**.**

39) Borchardt, R.T. and Wang, B. "Prodrug Strategies to Improve the Oral Absorption of Peptides and Peptide Mimetics" in *Controlled Drug Delivery. Designing Technologies for the Future.* Park. K. and Mrsny, R.J. Eds, American Chemical Society, Washington, D.C., **2000**, 36-45.

40) Wang, W.; Borchardt, R.T.; Wang, B. "Orally Active Peptidomimetic RGD Analogs That Are Glycoprotein IIb/IIIa Antagonists" *Current Med. Chem.* **2000**, *7*, 437-453.

41) Wang, W.; Springsteen, G.; Gao, S.; Wang, B. "The First Fluorescent Sensor for Boronic and Boric Acids with Sensitivity at Single Digit Micromolar Concentrations" *Chem. Comm.* **2000**, 1283-1284.

42) Liao, Y.; Hendrata, S; Bae, S.Y.; Wang, B. "Substitution Effect on the Release Rates of Esterase-Sensitive Coumarin-Based Prodrugs of Amines" *Chem. Pharm. Bull.* **2000**, *48*, 1138-1147.

43) Wang, W.; Sane, D. Borchardt, R.T.; Wang, B. "Delivering Peptides and Peptidomimetics Across Membrane Barriers. A Prodrug Approach" in *Peptides for the New Millennium: Proceedings of the 16th American Peptide Symposium*, Fields, G.B.; Barany, G.; and Tam, J.P. Eds, Kluwer Academic Publishers, Dordrecht, The Netherlands, **2000**, 214-216.

44) Gao, S.; Wang, W.; Wang, B. "An OsO_4-Mediated Carbon-Carbon Bond Cleavage Reaction to Give Anthraquinone" *Chem. Lett.* **2001**, 48-49.

45) Yu, H.; Wang, B. "Phenylboronic Acids Facilitated Selective Reduction of Aldehydes by Tributyltin Hydride" *Synthetic Commun.* **2001**, *31*, 163-169.

46) Yu, H.; Ballard, C.E.; Wang, B. "Highly Diastereoselective Ester Enolate Alkylation Using a Fructose-Derived Chiral Auxiliary for the Synthesis of α-Hydroxycarboxylic Acids" *Tetrahedron Lett.* **2001**, *42*, 1835-1838.

47) Gao, S.; Herzig, D.; Wang, B. "A Novel One-Step Conversion of Primary Amines to Nitriles" *Synthesis* **2001**, 544-546.

48) Latta, R.P.; Springsteen, G.; Wang, B. "Development of an Arylboronic Acid-based Solid-Phase Amidation Catalyst" *Synthesis* **2001**, 1611-1613.

49) Springsteen, G.; Ballard, C.E.; Gao, S.; Wang, W.; Wang, B. "The Development of Photometric Sensors for Boronic Acids" *Bioorg. Chem.*, **2001**, *29*, 259-270.

50) Springsteen, G.; Wang, B. "Alizarin Red as a General Fluorescent Reporter for Studying the Binding of Boronic Acids and Carbohydrates" *Chem. Commun.* **2001,** 1608-1609.

51) Gao, S.; Wang, W.; Wang, B. "Building Fluorescent Sensors for Carbohydrates Using Template-directed Polymerizations." *Bioorg. Chem.* **2001**, *29*, 308-320.

52) Jiang, J.; Wang, W.; Sane, D.; Wang, B. "Synthesis of New RGD Analogs for Targeted Drug Delivery" *Bioorg. Chem.* **2001**, *29*, 357-379.

53) Ballard, C.E.; Yu, H.; Wang, B. "Recent Development in Depsipeptide Research" *Current Med. Chem.* **2002**, *9*, 471-498.

54) Springsteen, G. and Wang, B. "A Detailed Examination of Boronic Acid-Diol Complexation" *Tetrahedron* **2002**, *58*, 5291-5300.

55) Yang, W.; Gao, S.; Gao, X.; Karnati, V.R.; Ni, W.; Wang, B.; Hooks, W.B.; Carson, J.; Weston, B. "Diboronic Acids as Fluorescent Probes for Cells Expressing Sialyl Lewis X" *Bioorg. Med. Chem. Lett.* **2002**, *12*, 2175-2177.

56) Yang, W.; Gao, X.; Springsteen, G.; Wang, B. "Catechol Pendant Polystyrene for Solid Phase Synthesis" *Tetrahedron Lett.* **2002**, *43*, 6339-6342.

57) Wang, W.; Gao, X. and Wang, B. "Boronic Acid-based Sensors for Carbohydrates" *Current Organic Chemistry,* **2002**, *6*, 1285-1317.

58) Yu, H.; Ballard, C.E.; Boyle, P.; Wang, B. "Highly Diastereoselective Synthesis of α-Hydroxycarboxylic Acids Using Fructose-derived Chiral Auxiliaries" *Tetrahedron,* **2002**, *58*, 7663-7679.

59) Liu, S.; Han, C.; Wang, B. "Prodrug Derivatization as a Means to Enhance the Delivery of Peptide and Peptidomimetic Drugs" in *Frontiers of Biotechnology and Pharmaceuticals*, Ming Guo, ed, Science Press, New York, **2002**, p291-310.

60) Han, C.; Liu, S.; Wang, B. "Major Factors Influencing Peptide Drug Absorption" in *Frontiers of Biotechnology and Pharmaceuticals*, Ming Guo, ed, Science Press, New York, **2002**, p270-290.

61) Karnati, V.; Gao, X.; Gao, S.; Yang, W.; Sabapathy, S.; Ni, W.; Wang, B. "A Selective Fluorescent Sensor for Glucose" *Bioorg. Med. Chem. Lett.* **2002**, *12*, 3373-3377.

62) Wang, W.; Zheng, A.; Liu, S.; Wang, B. "Solid Supports, Linkers and Solid-Phase Supported Reagents in Chemical Library Synthesis" in *Combinatorial Approaches to Drug Lead* Discovery, Liu, G.; Xiao, X.; Wang, J. Eds. p88-122, Science Press, New York, **2003**.

63) Yang, W.; Gao, S.; Wang, B. "Boronic Acid Compounds as Potential Pharmaceutical Agents" *Med. Res. Rev.* **2003**, *23*, 346-368.

64) Yang, W.; Yan, J.; Springsteen, G.; Deeter, S.; and Binghe Wang "A Novel Type of Fluorescent Boronic Acid that Shows Large Fluorescence Intensity Changes upon Binding with a Diol in Aqueous Solution at Physiological pH" *Bioorg. Med. Chem. Lett.* **2003,** *13*, 1019 - 1022.

65) Yang, W.; Yan, J.; Fang, H.; Wang, B. "The First Fluorescent Sensor for D-Glucarate Based on the Cooperative Action of Boronic Acid and Guanidinium Groups" *Chem. Commun.* **2003,** 792 - 793.

67) Franzen, S.; Ni, W.; Wang, B. "A Study of the Mechanism of Electron Transfer Quenching by Boron-Nitrogen Adducts in Fluorescent Sensors" *J. Phys. Chem. B* **2003,** *107*, 12942-12948.

68) Gao, X.; Zhang, Y.; Wang, B. "New Boronic Acid Fluorescent Reporter Compounds II. A Naphthalene-based Sensor Functional at Physiological pH" *Org. Lett.* **2003**, *5*, 4615-4618.

69) Ni, W.; Fang, H.; Springsteen, G.; Wang, B. "Design of Boronic Acid Spectroscopic Reporter Compounds by Taking Advantage of the pKa-Lowering Effect of Diol-binding: Nitrophenol-based Color Reporters for Diols" *J. Org. Chem.* **2004**, *69*, 1999-2007.

70) Fang, H.; Yan, J.; Wang, B. "Biaryl Product Formation from Cross-coupling in Palladium-Catalyzed Borylation of a Boc Protected Aminoquinoline Compound" *Molecules*, **2004**, *2*, 178-184.

71) Zych, L.; Yang, W.; Griffin, K.; Liao, Y.; Wang, B. "Coumarin-based Cyclic Prodrugs of Peptides-The Effect of Substitution" *Bioorg. Chem.* **2004**, *32*, 109-123.

72) Fang, H.; Li, J.; Sun, Y.; Wang, B.; Zhang, Y.-Q. "A New Data Mining Tool for Analyzing Coumarin-based Prodrugs," *Proc. of SPIE's Defence & Security 2004: Conference on Data Mining and Knowledge Discovery: Theory, Tools, and Technology*, **2004,** *5433*, 142-152.

73) Fang, H.; Kaur, G.; Wang, B. "Progress in Boronic Acid-Based Fluorescent Glucose Sensors" *J. Fluorescence,* **2004**, *14,* 481-489.

74) Yang, W.; Fan, H.; Gao, S.; Gao, X.; Ni, W.; Karnati, V.; Hooks, W.B.; Carson, J.; Weston, B.; Wang, B. "The First Fluorescent Diboronic Acid Sensor Specific for Hepatocellular Carcinoma Cells Expressing Sialyl Lewis X" *Chem. Biol.* **2004**, *11*, 439-448.

75) Yan, J.; Springsteen, G.; Deeter, S.; Wang, B. "The Relationship among pKa, pH, and Binding Constants in the Interactions between Boronic Acids and Diols-It is not as Simple as It Appears" *Tetrahedron*, **2004**, *60*, 11205-11209.

76) Yang, W.; Lin, L.; Wang, B. "A New Type of Water-Soluble Fluorescent Boronic Acid Suitable for Construction of Polyboronic Acids for Carbohydrate Recognition" *Heterocycl. Commun.* **2004**, *10*, 383-388.

77) Ni, W.; Kaur, G.; Springsteen, G.; Wang, B.; Franzen, S. "Regulating the Fluorescence Intensity of an Anthracene Boronic Acid System: A B-N Bond or a Hydrolysis Mechanism?" *Bioorg. Chem.* **2004**, *32*, 571-581.

78) Yang, W.; Gao, S.; Wang, B. "Biologically Active Boronic Acid Compounds" in *Organoboronic Acids,* Hall, D., Ed., Wiley-VCH, **2005**, p481-512.

79) Fang, H.; Kaur, G.; Yan, J.; Wang, B. "An Efficient Synthesis of Sterically Hindered Arylboronic Acids" *Tetrahedron Lett.* **2005**, *46*, 1671-1674.

80) Gao, X.; Zhang, Y.; Wang, B. "Naphthalene-based Water-soluble Fluorescent Sensors for Saccharides at Physiological pH" *N. J. Chem.* **2005**, *29*, 579-586.

81) Han, C.; Wang, B. "Factors that Impact the Developability of Drug Candidates-An Overview" in *Drug Delivery: Principles and Applications*, Editors: B. Wang, T. Siahaan, R. Soltero, John Wiley and Sons, **2005**, 1-15.

82) Wang, W.; Gao, S.; Wang, B. "Molecularly Imprinted Polymers As Recognition Elements In Optical Sensors" in *Molecularly Imprinted Materials: Science and Technology,* Mingdi Yan and Olof Ramstrom, eds., Marcel Dekker, **2005**, 701-726.

83) Chen X.; Yang, W.; Sivamani, E.; Bruneau, A.H.; Wang, B.; and Qu, R. "Elimination of Perennial Ryegrass by Engineering *E. coli argE* gene and suicidal activation of Pro-herbicide, *N*-acetyl-PPT" *Mol. Breeding* **2005,** *15*, 339-347.

84) Yan, J.; Fang, H.; Wang, B. "Boronolectins and Fluorescent Boronolectins-An Examination of the Detailed Chemistry Issues Important for their Design" *Med. Res. Rev.* **2005**, *25*, *490-520.*

85) Gao, X.; Zhang, Y.; Wang, B. "A Highly Fluorescent Water-soluble Naphthalene-based Boronic Acid Reporter for Saccharide Sensing that also Shows Ratiometric UV Changes" *Tetrahedron,* **2005**, *61*, 9111-9117.

86) Wang, J.; Jin, S.; Wang, B. "A New Boronic Acid Fluorescent Reporter that Changes Emission Intensity at Three Wavelengths upon Sugar Binding" *Tetrahedron Lett.* **2005**, *46*, 7003-7006.

87) Yang, W.; Lin, L.; Wang, B. "A Novel Type of Fluorescent Boronic Acid for Carbohydrate Recognition" *Tetrahedron Lett.* **2005**, *46*, 7981-7984.

88) Yan, J.; Jin S.; Wang, B. "A Novel Redox-Sensitive Protecting Group for Boronic Acids, MPMP-Diol" *Tetrahedron Lett.* **2005**, *46*, 8503-8505.

89) Zhang, Y.; Gao, X.; Hardcastle, K.; Wang, B. "Water-soluble Fluorescent Boronic Acid Compounds for Saccharide Sensing: Structural Effect on Their Fluorescence Properties" *Chem.-Eur. J.* **2006,** *12*, 1377-1384.

90) Zou, W.; He, M; Yue, P.; Zhou, Z.; Lin, N.; Lonial, S.; Khuri, F.R.; Wang, B.; Sun, S-Y. "Vitamin C Inactivates the Proteasome Inhibitor PS-341 (Bortezomib) in Human Cancer Cells" *Clin. Cancer Res.* **2006**, *12*, 273-280 (Editorial *Clin. Cancer Res.* **2006**, *12*, 3-4).

91) Wang, J.; Lin, N.; Jin, S.; Wang, B. "Indolylboronic acids Fluorescent Reporters for Sugar Sensing and Recognition" *Chem. Biol. Drug Design,* **2006**, *67*, 137-144.

92) Kaur, G.; Fang, H.; Gao, X.; Li, H.; Wang, B. "Diboronic Glucose Sensors" *Tetrahedron*, **2006**, *62*, 2583-2589.

93) Zheng, S.; Reid, S.; Lin, N.; Wang, B. "Microwave-assisted Synthesis of Ethynylarylboronates for the Construction of Boronic acid-based Fluorescent Sensors for Carbohydrates" *Tetrahedron Lett*., **2006**, *47*, 2331-2335.

94) Kaur, G.; Lin, N.; Fang, H.; Wang, B. "Boronic Acid-based Glucose Sensors" in *Topics in Fluorescence Spectroscopy, vol. 11,* "Glucose Sensing," Geddes, C.D. and Lakowicz, J.R., Editors, Springer Press, **2006**, pp 377-397.

95) Li, M.; Wang, B. "Computational Studies of H5N1 Hemagglutinin Binding with SA-α-2, 3-Gal and SA-α-2, 6-Gal" *Biochem. Biophys. Res. Commun.* **2006**, 347-662-668.

96) Fang, H.; Kaur, G.; Wang, B. "Functional Group Approaches to Prodrugs: Functional Groups in Peptides" in *Prodrugs: Challenges and Rewards, Part 2,* Editors: V.J. Stella, R.T. Borchardt, M.J. Hageman, R. Oliyai, and J. Tilley, Vol 4 in "Biotechnology: Pharmaceutical Aspects," Series Editors: R. T. Borchardt and C. R. Middaugh AAPS Press, **2007**, 265-288

97) Zheng, S.; Wang, B. "Iodomethyl Methyl Ether 13057-19-7" *Encycl. Reagen. Org. Syn.* **2007**, DOI: 10.1002/047084289X.ri030.pub2.

98) Lin, N.; Yan, J.; Huang, Z.; Altier, C.; Yan, J. Carrasco, N.; Suyemoto, M.; Johnson, L.; Fang, H.; Wang, Q.; Wang, S.; Wang, B. "Design and synthesis of boronic acid-modified thymidine triphosphate for incorporation into DNA" *Nucl. Acid Res.* **2007**, *35*, 1222-1229.

99) Jin, B. Zhang, Y.; Wang, B. "Granular Kernel Trees with Parallel Genetic Algorithms for Drug Activity Comparisons" *Int. J. Data Mining Bioinform*. **2007**, *1*, 270-285.

100) Zhang, Y.; Ballard, C.E.; Zheng, S.; Gao, X.; Ko, K.C.; Yang, H.; Brandt, G.; Lou, X.; Tai, P.C.; Lu, C-D.; Wang, B. "Design, synthesis and evaluation of efflux substrate-metal chelator conjugates as potential anti-microbial agents" *Bioorg. Med. Chem. Lett.* **2007,** *17*, 707-711.

101) Wang, J.; Jin, S.; Akay, S.; Wang, B. "Design and synthesis of a long-wavelength fluorescent boronic acid reporter compound" *Eur. J. Org. Chem.* **2007**, 2091-2099.

102) Zhang, Y.; Li, M.; Chandrasekaran, S.; Gao, X.; Fang, X. Lee, H-W.; Hardcastle, K.; Yang, J.; Wang, B. "A unique quinolineboronic acid-based supramolecular structure that relies on double intermolecular B-N bonds for self-assembly in solid state and in solution" *Tetrahedron* **2007**, *63*, 3287-3292.

103) Zheng, S.; Lin, N.; Reid, S. Wang, B. "Effect of extended conjugation with a phenylethynyl group on the fluorescent properties of water-soluble arylboronic acids" *Tetrahedron* **2007**, *63*, 5427–5436.

104) Li, M.; Wang, B. "Homology Modeling and the Examination of the Effect of the D92E Mutation on the H5N1 Nonstructural Protein NS1 Effector Domain" *J. Mol. Model.* **2007**, *13, 1*237–1244

105) Akay, S.; Yang, W.; Wang, J.; Lin, L.; Wang, B. "Synthesis of Dual Fluorescent Benzo[b]thiophene Boronic Acid Derivatives for Sugar Sensing" *Chem. Biol. Drug. Design* **2007**, *70,* 279-289.

106) Jin, S.; Wang, J.; Li, M.; Wang, B. "Synthesis, Evaluation, and Computational Studies of Naphthalimide-based Long-wavelength Fluorescent Boronic Acid Reporters" *Chem. Eur. J.* **2008**, *14,* 2795.

107) Jin, S.; Li, M.; Zhu, C.; Tran, V.; Wang, B. "Computer-based *De Novo* Design, Synthesis, and Evaluation of Boronic Acid-based Artificial Receptors for Selective Recognition of Dopamine" *ChemBioChem* **2008**, *9,* 1431-1438.

108) Ni, N.; Choudhary, G.; Li, M.; Wang, B. "Pyrogallol and its analogs can antagonize bacterial quorum sensing in *Vibrio harveyi*" *Bioorg. Med. Chem. Lett.* **2008,** *18,* 1567-1572.

109) Li, M.; Huang, Y-J.; Tai, P.C.; Wang, B. "Discovery of the First SecA Inhibitors Using Structure-Based Virtual Screening" *Biochem. Biophys. Res. Commun.* **2008**, *368*, 839-845.

110) Li, M.; Ni, N.; Wang, B. Zhang, Y. "Modeling the Excitation Wavelengths (λex) of Boronic Acids" *J. Mol. Model.* **2008**, *14*, 441-449

111) Ni, N.T.; Chou, H.-T.; Wang, J.F.; Li, M. Lu, C.-D.; Tai, P. C.; Wang, B. "Identification of Boronic Acids as Antagonists of Bacterial Quorum Sensing in *Vibrio harveyi" Biochem. Biophys. Res. Commun*. **2008**, *369,* 590-594

112) Du, L.; Li, M.; Zheng, S.; Wang, B. "Rational Design of a Fluorescent Hydrogen Peroxide Probe Based on the Umbelliferone Fluorophore" *Tetrahedron Lett.* **2008**, *49*, 3045-3048.

113) Wang, B.; Chen, M.; Zhu, H.; Zhang, J.; Fang, H.; Wang, B. Xu, W. "Design, Synthesis, and QSAR Studies of Novel Lysine Derivatives as Amino-peptidates N/CD13 Inhibitors" *Bioorg. Med. Chem.***2008,** *15*, 5473-81.

114) Tsai, K-C.; Wang, S-H.; Hsiao, N-W.; Li, M.; Wang, B. "The Effect of Different Electrostatic Potentials on Docking Accuracy: A Case Study using DOCK5.4" *Bioorg. Med. Chem. Lett.* **2008**, *18,* 3509-3512

115) Li, M.; Ni, N.; Chou, H-T.; Lu, C-D.; Tai, P.C.; Wang, B. "Structure-Based Discovery and Experimental Verification of Novel AI-2 Quorum Sensing Inhibitors against *Vibrio harveyi*" *ChemMedChem,* **2008**, *3*, 1242-1249.

116) Li, M.; Fang, H.; Du, L.; Wang, B. "Computational Studies of the Binding Site of α_{1A}-Adrenoceptor Antagonists" *J. Mol. Model.* **2008**, *14,* 957-966

117) Li, M.; Lin, N.; Huang, Z.; Du, L.; Fang, H.; Altier, C.; Wang, B. "Selecting Aptamers for a Glycoprotein through the Incorporation of the Boronic Acid Moiety," *J. Am. Chem. Soc.* **2008,** *130,* 12636-12638

118) Ko, K-C.; Kamio, M.; Wang, B.; Tai, P-C.; Derby, C. Identification of Bactericidal Compounds Produced by Escapin, an L-Amino Acid Oxidase in the Ink of the Sea Hare *Aplysia californica*" *Antimicrob. Agents Chemo.* **2008,** *52,* 4455-4462

119) Wang, Q.; Chen, M.; Zhu, H.; Zhang, J.; Fang, H.; Wang, B.; Xu, W. "Design, Synthesis, and QSAR Studies of Novel Lysine Derivatives as Amino-peptidase N/CD13 Inhibitors" *Bioorg. Med. Chem.* **2008**, 16, 5473-81

120) Shang, L.; Wang, Q.; Fang, H.; Mu, J.; Wang, X.; Yuan, Y.; Wang, B.; Xu, W. Novel 3-Phenylpropane-1,2-diamine Derivates as Inhibitors of Aminopeptidase N (APN) *Bioorg. Med. Chem.* **2008**, 16, 9984-90

121) Zheng, S.; Kaur, G.; Wang, H.; Li, M.; Macnaughtan, M.; Reid, S.; Yang, X.; Wang, B. Ke, H.; Prestegard, J. "Synthesis, SAR, Molecular Modeling, and NMR Studies of Phenylalkyl Ketone Series as Highly Potent and Selective PDE4D Inhibitors" *J. Med. Chem.* **2009**, *51*, 7673-7688.

122) Ni, N.; Li, M.; Wang, J.; Wang, B. "Inhibitors of Bacterial Quorum Sensing" *Med. Res. Rev.* **2009,** *29*, 65-124.

123) Kamio, M.; Ko, K-C.; Zheng, S.; Wang, B.; Collins, S.; Gadda, G.; Tai, P-C.; Derby, C. "The Chemistry of Escapin: Identification and Quantification of the Components in the Complex Mixture Generated by an L-Amino Acid Oxidase in the Defensive Secretion of the Sea Snail *Aplysia californica*" *Chem.-Eur. J.* **2009,** *15,* 1597-1603.

124) Jin, S. Cheng, Y.F.; Reid, S.; Li, M.; Wang, B. "Carbohydrate Recognition by Boronolectins, Small Molecules, and Lectins" *Med. Res. Rev.* **2009**, *in press.*

125) Jin, S.; Zhu, C.; Li, M.; Wang, B. "Identification of the First Fluorescent α-Amidoboronic Acids that Change Fluorescent Properties upon Sugar Binding" *Bioorg. Med. Chem. Lett.* **2009,** *17*, 1596-1599.

126) Ni, N.; Choudhary, G.; Li, M.; Wang, B. "A New Phenothiazine Structural Scaffold as Inhibitors of Bacterial Quorum Sensing in *Vibrio harveyi*" *Biochem. Biophys. Res. Commun.* **2009**, *382,* 153-156.

127) Yin, C.; Hui, X.; Xu, P.; Niu, L.; Y. Chen, Y.; Wang, B. "Development and Application of a New General Method for the Asymmetric Synthesis of (E)-(2-en-3-ynyl) Amines" *Adv. Synth. Catalysis* **2009,** *351,* 357-262.

128) Shang, L.; Fang, H.; Zhu, H.; Wang, X.; Wang, Q.; Mu, J.; Wang, B.; Kishioka, S.; Xu, W. **"**Design, Synthesis and SAR Studies of Tripeptide Analogs with the 3-Phenylpropane-1,2-diamine Scaffold as Aminopeptidase N/CD13 Inhibitors" *Bioorg. Med. Chem.* **2009**, *17*, 2775-84

129) Yang, K; Wang, Q.; Su, L.; Fang, H.; Wang , X.; Gong, J.; Wang, B.; Xu , W. **"**Design and Synthesis of Novel Chloramphenicol Amine Derivatives as Potent Aminopeptidase N (APN/CD13) Inhibitors" *Bioorg. Med. Chem.* **2009**, *17*, 3810-7

130) Peng, H.; Cheng, Y.; Ni, N.; Li, M. Lu, C-D.; Wang, B. "Synthesis and Evaluation of New Antagonists of Bacterial Quorum Sensing in *Vibrio harveyi" ChemMedChem,* **2009**, *in press*.

131) Yang, X.; Shan, J.; Cheng, Y.; and Wang, B. "Boronic Acid-based Chemosensors" in *"Artificial Receptors for Chemical Sensors"* by WILEY-VCH; Ed.: Mirsky, V.M. and Yatsimirsky, A.K. **2009,** invited chapter accepted

132) Dai, C.; Chu, Y.; Wang, B. "5,5,5',5'-Tetramethyl-2,2'-bi-1,3,2-dioxaborinane" in *Encyclopedia of Organic Reagents,* **2009**, invited manuscript accepted

133) Harvey, D.; Nettles, J.; Wang, B.; Sun, S.; and Lonial, S. "Vitamin C: Not For Breakfast Anymore…If you have Myeloma" (Editorial) *Leukemia,* **2009**, invited editorial accepted

134) Ni, N.; Li, M.; Chou, H.-T.; Choudhary, G.; Lu, C.-D.; Tai, P. C.; Wang, B. "Structure-activity Relationship Studies of Arylboronic Acids as Inhibitors of Bacterial Quorum Sensing in *Vibrio harveyi*" *Chem. Biol. Drug Design,* **2009,** *74,* 51-56.

135) Chu, Y.; Dai, C.; Wang, B. "1, 3, 2-Dioxaborinane, 2-[2-(bromomethyl)phenyl]- and 1,3,2-Dioxaborinane, 2-[2-(bromomethyl)phenyl]-5,5-dimethyl-" in *Encyclopedia of Organic Reagents,* **2009**, invited manuscript accepted

136) Shan, J.; Choudhary, G.; Li, M.; Wang, B. "Stabilization of the Boronic Acid Functional Group in Copper-mediated Click Chemistry" *Chem. Commun.* **2009**, manuscript accepted

137) Cheng, Y.; Li, M.; Wang, S.; Peng, H.; Reid, S.; Ni, N.; Fang, H.; Xu, W.; Wang, B. "Carbohydrate Biomarkers for Future Disease Detection and Treatment" *Science in China-Series B: Chemistry*, **2009**, *invited manuscript submitted*

138) Wang, B.; Huang, Z.; Pu, L. "Sino-US Chemistry Professors Conference: History and Outlook" *Science in China-Series B: Chemistry*, **2009**, *invited manuscript submitted*

139) Tsai, K-C.; Hsiao, N-W; Chen, Y-C.; Wang, S-H.; Li, C-L.; Li, M.; Wang, B. "A Comparison of Different Electrostatic Potentials on Prediction Accuracy in CoMFA and CoMSIA Studies" *Eur. J. Med. Chem. **2009,*** Manuscript in revision

140) Cheng, Y.; Shan, J.; Yang, X.; Wang, B. "Covalent Interactions in Chemosensor Design" in Chemosensors: Principles, Strategies, and Applications, Wang, B and Anslyn, E.A. Editors, **2010**, invited manuscript submitted

141) Yang, X.; Shan, J.; Cheng, Y.; Wang, B. "Synthetic Lectin Mimics-Artificial Carbohydrate Receptors" in Carbohydrate Recognition: Biological Problems, Methods, and Potential Applications, Wang, B. and Boons, G-J Editors, **2010**, invited manuscript submitted

142) Ni, N.; Choudhary, G.; Wang, B. "Boronic Acids in Chemical Biology Research" in *Boronic Acids* Hall, D. Editor, **2010**, invited manuscript in preparation

143) Du, L.; Ni, N.; Li, M.; Wang, B. "A Fluorescent Hydrogen Peroxide Probe Based on a 'Click' Modified Coumarin Fluorophore" *Tetrahedron Lett.* **2009,** manuscript submitted

Books Edited

1) Pharmaceutical Profiling In Drug Discovery for Lead Selection, Editors: R.T. Borchardt, E.H. Kerns, C.A. Lipinski, D.R. Thakker, and B. Wang, AAPS Press, **2004**.

2) Drug Delivery: Principles and Applications, Editors: Binghe Wang, Teruna Siahaan, Rick Soltero, John Wiley and Sons, **2005**

3) Evaluation of Drug Candidates for Preclinical Development: Pharmacokinetics, Metabolism, Pharmaceutics, and Toxicology in *Wiley Series in Drug Discovery and Development*, Editors: Han, C.; David, C.; Wang, B., Series Editor: B. Wang, John Wiley and Sons, to be published in **2009** (manuscripts submitted to publisher)

4) Carbohydrate Recognition: Biological Problems, Methods, and Potential Applications in *Wiley Series in Drug Discovery and Development,* Editors: Wang, B. and Boons, G-J., John Wiley and Sons, to be published in **2010**

5) Chemosensors: Principles, Strategies, and Applications in *Wiley Series in Drug Discovery and Development,* Editors: Wang, B. and Anslyn, E. J., John Wiley and Sons, to be published in **2010**

Books Edited as a Series Editor

1) Computer Applications in Pharmaceutical Research and Development in *Wiley Series in Drug Discovery and Development*, Editor: S. Ekins, Series Editor: B. Wang, John Wiley and Sons, **2006**.

2) Glycogen Synthase Kinase-3 (GSK-3) and Its Inhibitors: Drug Discovery and Development in *Wiley Series in Drug Discovery and Development*, Editors: Ana Martinez, Ana Castro, and Miguel Medina; Series Editor: B. Wang, John Wiley and Sons, **2006**.

3) Drug Transporters in *Wiley Series in Drug Discovery and Development*, Editors: You, G.; Morris, M.; Series Editor: B. Wang, John Wiley and Sons, **2007**.

4) Aminoglycoside Antibiotics: From Chemical Biology to Drug Discovery *in Wiley Series in Drug Discovery and Development*, Editor: D. Arya, Series Editor: B. Wang, John Wiley and Sons, **2007**.

5) Drug-Drug Interactions in *Wiley Series in Drug Discovery and Development*, Editors: Li, A., Series Editor: B. Wang, John Wiley and Sons, **2007**.

6) Dopamine Transporter: Biology, Chemistry and Pharmacology in *Wiley Series in Drug Discovery and Development*, Editors: Trudell, M.L and Izenwasser, S. Series Editor: B. Wang, John Wiley and Sons, **2008**

7) ABC Transporters and Multidrug Resistance in *Wiley Series in Drug Discovery and Development*, Editors: Boumendjel, A., Boutonnat, J., and Robert, J., Series Editor: B. Wang, John Wiley and Sons, **2009**

8) Kinase Inhibitors for Oncology in *Wiley Series in Drug Discovery and Development*, Editors: Rongshi Li and Jeffrey A. Stafford, Series Editor: B. Wang, John Wiley and Sons, **2009**

9) Drug Design of Zinc-Enzyme Inhibitors: Functional, Structural, and Disease Applications in *Wiley Series in Drug Discovery and Development*, Editors: Claudiu T Supuran, and Jean-Yves Winum, Series Editor: B. Wang, John Wiley and Sons, **2009**

10) Carbohydrate-Based Vaccines in *Wiley Series in Drug Discovery and Development*, Editor: Guo, Z., Series Editor: B. Wang, John Wiley and Sons, **2009**

11) Evaluation of Drug Candidates for Preclinical Development: Pharmacokinetics, Metabolism, Pharmaceutics, and Toxicology in *Wiley Series in Drug Discovery and Development*, Editors: Han, C.; David, C.; Wang, B., Series Editor: B. Wang, John Wiley and Sons, to be published in **2009** *in press.*

12) Oral Bioavailability: Basic Principles, Advanced Concepts and Applications in *Wiley Series in Drug Discovery and Development*, Editors: Ming Hu and Xiaoling Li, to be published in **2009** (projected)

13) HIV-1 Integrase: Mechanism of Action and Inhibitor Design in *Wiley Series in Drug Discovery and Development*, Editor: Neamati, N., Series Editor: B. Wang, John Wiley and Sons, to be published in **2009** (projected)

14) Carbohydrate Recognition: Biological Problems, Methods, and Potential Applications in *Wiley Series in Drug Discovery and Development,* Editors: Wang, B. and Boons, G-J., John Wiley and Sons, to be published in **2010**

15) Chemosensors: Principles, Strategies, and Applications in *Wiley Series in Drug Discovery and Development,* Editors: Wang, B. and Anslyn, E. J., John Wiley and Sons, to be published in **2010**

Patents

1. Borchardt, R.T.; Siahaan, T.; Stella, V.J.; Gangwar, S.; Wang, B. "Preparation of Cyclic Prodrugs of Peptides and Peptide Nucleic Acids Having Improved Metabolic Stability and Cell Membrane Permeability" US patent #5672584, **1997**

2. Wang, B.; Weston, B.; Yang, W.; Gao, X.; Karnati, V.; Ni, W. "Fluorescent Sensors for Detecting Saccharides" US patent #6916660, granted July 12, **2005**

3. Wang, B., Gao, X., Yang, W. Fang, H., Yan, J. "Water Soluble Boronic Acid Fluorescent Reporter Compounds and Methods of Use thereof" patent filed, September **2004**

4. Wang, B. Li, M.; Lin, N.; Huang, Z.; Yang, X., Zheng, S.; Cheng, Y. "Methods of Preparation of Nucleotides and Aptamers Containing Boronic Acid Groups and Uses thereof," patent filed July 17, **2008**

5. Wang, B.; Ni, N.; Li, M.; Chou, H.-T.; Lu, C-D.; Tai, P.C. "Compositions for Regulating or Modulating Quorum Sensing in Bacteria, Methods of Using the Compounds, and Methods of Regulating or Modulating Quorum Sensing in Bacteria," Patent filed May **2008**

6. Derby, C.; Ko, K-C.; Kamio, M.; Wang, B.; Tai, P.C. "Synergistic Antimicrobial Molecules," Provisional patent filed July **2008**

Meeting Presentations

(presenter underlined)

1) Wang, B.; Mertes, M.P. "Model Studies of the Chemical Mechanism of Thymidylate Synthase" Presented at the 25th Annual MIKI Medicinal Chemistry Meeting-in-Miniature, Lawrence, Kansas, 7-9 April, 1987.

2) Wang, B.; Mertes, M.P.; Mertes, K.B. " Thymidylate Synthase Mechanism Studies Using Chemical Models: A Charge Relay Mechanism?" Presented at the 22nd National Medicinal Chemistry Symposium, Austin, Texas, July 29-August 2, 1990.

3) Wang, B.; Liu, Siming; Borchardt, Ronald T. "The Development of a Novel Redox-Sensitive Protecting Group for Amines and Alcohols" Presented at the 206th American Chemical Society National Meeting in Chicago, IL, August 22-27, 1993 (Abstract #139, organic section) and highlighted in C&EN September 13, 1993 issue, page 41).

4) Wang, B.; Nicolaou, M.; Liu, S.; Kucera, K.; Borchardt, R.T. "Structural Analysis of A Facile Lactonization System" Presented at the 208th American Chemical Society National Meeting in Washington, D.C., August 21-25, 1994 (Abstract #262, medicinal chemistry section)

5) Wang, B.; Gangwar, S.; Pauletti, G.; Siahaan, T.; Borchardt, R.T. "Synthesis of a Novel, Enzyme-sensitive Cyclic Prodrug of a Model Hexapeptide Having Enhanced Membrane Permeability and Enzymatic Stability. II. 3-(2'-Hydroxy-4',6'-Dimethylphenyl)-2,2-Dimethylproprionic Acid Pro-moiety" Presented at the 210th American Chemical Society National Meeting, Chicago, Illinois, August 20-24, 1995 (Abstract # 73, Medicinal Chemistry Division).

6) Pauletti, G.; Gangwar, S.; Wang, B.; Siahaan, T.; Borchardt, R.T. "Novel Prodrug Approaches to Prepare Cyclic Peptide with Enhanced Membrane Permeability and Enzymatic Stability. II. 3-(2'-Hydroxy-4',6'-Dimethylphenyl)-2,2-Dimethylproprionic Acid Pro-moiety" Presented at the 1995 AAPS national meeting, November 5-9, 1995.

7) Wang, B.; Wang, W. "Development of a Redox-Sensitive Protecting Group Using a Facilitated Lactonization Reaction: Protection of Hydroxyl Groups" Presented at the penta-sectional meeting of American Chemical Society, Oklahoma Section. 1994

8) Wang, B.; Wang, W.; Liu, S.; Borchardt, R.T. "Development of a Redox-Sensitive Protecting Group Using a Facilitated Lactonization Reaction: Protection of Hydroxyl Groups" Presented at

the 210th American Chemical Society National Meeting, Chicago, Illinois, August 20-24, 1995 (Abstract #249, Organic Chemistry Division).

9) Wang, B.; Gangwar, S.; Pauletti,G.; Siahaan, T.; Borchardt, R.T. "A New Strategy for the Preparation of Peptide Prodrugs that Utilizes a Facile Cyclization Reaction" 1995 Conference on Pharmaceutical Science and Technology: Symposium on Drug Delivery Systems August 22-25, 1995, Chicago, Illinois

10) Zheng, A.; and Wang, B. "A Photoprotecting Group for Amines" Presented at the 213th American Chemical Society National Meeting, April 13-17, 1997, San Francisco, CA (Organic Division).

11) Zheng, A.; Zhang, H.; and Wang, B. "A Photochemical Approach to the Synthesis of Coumarin-Based Prodrugs of Amines and Alcohols" Presented at the 213th American Chemical Society National Meeting, April 13-17, 1997, San Francisco, CA (Organic Division).

12) Shan, D.; Wang, W.; Zhang, H.; Zheng, A.; and Wang, B. "Synthesis of Novel Coumarin-Based Cyclic Prodrugs of Peptides and Peptide Mimetics" Presented at the 213th American Chemical Society National Meeting, April 13-17, 1997, San Francisco, CA (Medicinal Chemistry Division).

13) Zhang, H.; Wang, W.; Shan, D.; and Wang, B. "Bioreversible Cyclic Prodrugs of Peptides. Evaluation of the Release Kinetics" Presented at the 213th American Chemical Society National Meeting, April 13-17, 1997, San Francisco, CA (Medicinal Chemistry Division).

14) Zhang, H.; Wang, W.; Zheng, A.; and Wang, B. "Coumarin-Based Prodrugs of Amines. Structural Effects on the Release Kinetics" Presented at the 213th American Chemical Society National Meeting, April 13-17, 1997, San Francisco, CA (Medicinal Chemistry Division).

15) Wang, W.; Camenisch, G.; Zhang, H.; Borchardt, R.T. and Wang, B. "Synthesis of Coumarin-Based Cyclic Prodrugs of Peptidiomimetic Fibrinogen Antagonists" Presented in at the 214th American Chemical Society National Meeting, Las Vegas, September 7-11, 1997 (Division of Medicinal Chemistry).

16) Gudmundsson, O.S.; Jois, S.D.S.; Vander Velde, D.G.; Shan, D.; Wang, W.; Zhang, H.; Wang, B.; and Borchardt, R.T. "The Effect of Conformation on the Membrane Permeabilities of Coumarin-Based Cyclic Prodrugs of Opioid Peptides" Presented at the 1997 American Association of Pharmaceutical Scientists National Meeting, November 2-6, 1997, Boston, MA..

17) Gudmundsson, O.S.; Pauletti, G.M.; Wang, W.; Shan, D.; Zhang, H.; Wang, B.; and Borchardt, R.T. "Novel Prodrugs of Opioid Peptides Which Exhibit Increased Metabolic Stability and Enhanced Cellular Permeability" Presented at the 1997 American Association of Pharmaceutical Scientists National Meeting, November 2-6, 1997, Boston, MA.

18) Camenisch, G.P.; Wang, W.; Zhang, H.; Wang, B.; and Borchardt, R.T. "Esterase-Sensitive Coumarin-Based Prodrugs of RGD Mimetics Having Enhanced Membrane Permeability" Presented at the 1997 American Association of Pharmaceutical Scientists National Meeting, November 2-6, 1997, Boston, MA.

19) Wang, B.; Liao, Y.; Wang, W. "Enantiospecific Artificial Receptors and Their Potential Applications in Separation and Analytical Chemistry" Presented at the 31st Annual Higuchi Research Seminar, March 8-11, 1998, Lake Ozark, MO.

20) Wang, W.; Sane, D.C.; Bai, S.A.; Chang, C.; and Wang, B. "Synthesis and Biological Evaluation of a Coumarin-based, Esterase-sensitive Cyclic Prodrug of an Antithrombotic RGD analog: MK-383" Presented at the 26th National Medicinal Chemistry Symposium, Richmond, VA, June 14-18, 1998.

21) Liao, Y.; Wang, W.; Wang, B. "Enantioselective Polymeric Transporters of D-Tryptophan Prepared Using Molecular Imprinting Techniques" Presented at the 216th American Chemical Society National Meeting, Boston, MA, August, 1998 (Division of Organic Chemistry).

22) Zheng, A.; Shan, D.; Wang, W. Borchardt, R.T.; and Wang, B. "A "Trimethyl Lock"-Facilitated Cyclic Ether Formation: Potential Applications in Peptide and Organic Syntheses" Presented at the 216th American Chemical Society National Meeting, Boston, MA, August, 1998 (Division of Organic Chemistry).

23) Wang, W.; Sane, D.C.; Bai, S.A.; Chang, C.; Borchardt, R.T.; and Wang, B. "Synthesis and Biological Evaluation of a Coumarin-based, Esterase-sensitive Cyclic Prodrug of an Antithrombotic RGD analog: MK-383" Presented at the 216th American Chemical Society National Meeting, Boston, MA, August, 1998 (Division of Medicinal Chemistry).

24) Zheng, A.; Shan, D., and Wang, B. "A Novel Redox-Sensitive Resin Linker for Solid Phase Peptide Synthesis" Presented at the Second International Conference on Combinatorial Library methods for Basic Research and Drug Discovery, Tucson, Arizona, January 10-12.

25) Zheng, A.; Shan, D.; and Wang, B. "A Redox-Sensitive Resin Linker for the Solid Phase of *C*-Terminal Modified Peptides" Presented at the 217th American Chemical Society National Meeting, Anaheim, CA, March 21-25, 1999(Organic Chemistry Division).

26) Borchardt, R.T.; Camenisch, G.; Hugger, E.; Wang, W.; Sane, D.C.; Wheller, G.L.; Cheng, C.P.; and Wang, B. "Prodrug Strategies to Improve the Oral Absorption of Peptide Mimetics" Presented at the 217th American Chemical Society National Meeting, Anaheim, CA, March 21-25, 1999 (Polymer Chemistry division).

27) Zheng, A.; Shan, D., and Wang, B., "A Redox-Sensitive Resin Linker for the Solid Phase Synthesis of *C*-Terminal Modified Peptides " Presented at the 217th American Chemical Society National Meeting (Organic Division), Anaheim, CA, March 21-25, 1999.

28) Borchardt, R.T.; Camenisch, G.; Hugger, E.; Wang, W.; Sane, D.C.; Wheller, G.L.; Cheng, C.P.; and Wang, B. "The Use of Prodrug Strategies to Optimize the Oral Absorption of RGD Peptide Mimetics" Presented at the Ninth International Symposium on Recent Advances in Drug Delivery Systems, Salt Lake City, UT, February 22-24, 1999.

29) Wang, B. and Borchardt, R.T. "Delivering Peptides and Peptidomimetics Across Membrane Barriers. A Prodrug Approach" Presented at the 16th American Peptide Symposium, Minneapolis, MN, June 26-July 1, 1999 (plenary session).

30) Liao, Y. and Wang, B. “Substituted Coumarins as Esterase-Sensitive Prodrug Moieties with Improved Release Rates” Presented at the 218th American Chemical Society National Meeting (Medicinal Chemistry Division), New Orleans, Louisiana, August 22-26, 1999.

31) Gao, S.; Wang, W.; Springsteen, G., and Wang, B. "Design and synthesis of the first fluorescent sensors for boric acid and boronic acids" Presented at the 220th National Meeting in Washington, D.C., August 20- August 24, 2000.

32) Yu, H. and Wang, B. "Phenylboronic Acid Facilitated Selective Reduction of Aldehydes by Tributyltin Hydride" Presented at the 220th National Meeting in Washington, D.C., August 20- August 24, 2000.

33) Yu, H. and Wang, B. "Organoboronates as Templates in Ring-Closing Metathesis" Presented at the 220th National Meeting in Washington, D.C., August 20- August 24, 2000.

34) Gao, S.; Wang, W.; and Wang, B. "A New OsO4-Mediated Carbon-Carbon Bond Cleavage Reaction Leading to the Formation of Anthraquinone" Presented at the 220th National Meeting in Washington, D.C., August 20- August 24, 2000.

35) Gao, S.; Herzig, D.; and Wang, B. "OsO_4-Mediated Conversion of Primary Amines to Nitriles" Presented at the 220th National Meeting in Washington, D.C., August 20- August 24, 2000.

36) Latta, R.; Springsteen, G.; and Wang, B. "Boronic Acid-Mediated Amide Bond Formation" Presented at the 220th National Meeting in Washington, D.C., August 20- August 24, 2000.

37) Wang, B; Wang, W.; Springsteen, G.; and Gao, S. "Design and Synthesis of the First Fluorescent Sensors for Boric Acid and Boronic Acids" Presented at the Pacificchem 2000, December 14-December 19, 2000, Honolulu, Hawaii.

38) Wang, B.; Gao, S.; and Wang, W. "Building Fluorescent Sensors by Template Polymerization: The Preparation of Fluorescent Sensors for Saccharides" Presented at the Pacificchem 2000, December 14-December 19, 2000, Honolulu, Hawaii.

39) Wang, B. “A Coumarin-based Prodrug Approach to the Improved Delivery of Peptides and Peptidomimetics” Presented at the American Heart Association Established Investigators meeting, May 5, 2001, Dallas, Texas.

40) Gao, S.; Yang, W.; Gao, X.; Kanati, V.; Ni, W.; and Wang, B. “Fluorescent Tags Targeted on Cell-Surface Carbohydrates” Presented at the Symposium on Innovative Molecular Analysis Technologies (IMAT), NCI, June 27-29, 2001, Washington, D.C.

41) Springsteen, G. and Wang, B. “Boronic Acid/Diol Binding Strengths Determined by Alizarin Red S” Presented at the 222nd ACS National Meeting, August 26-30, 2001, Chicago, Illinois.

42) Wang, B. and Springsteen, G. “Boronic acid/diol binding strengths determined by Alizarin Red S” Presented at the 53rd Annual Meeting of the Southeastern Region of the American Chemical Society (SERMACS), September 23-26, 2001

43) Yu, H.; Ballard, C. E.; Boyle, P.D.; and Wang, B. **"**A Carbohydrate Derivative Used as a Chiral Auxiliary in the Synthesis of α-Hydroxy Carboxylic Acids" Presented at the 223rd ACS National Meeting, April 7-11, 2002, Orlando, Florida.

44) Gao, X.; Karnati, V.V.R.; Gao, S.; Yang, W.; Ni, W.; Sankar, S. and Wang, B. "A diboronic acid fluorescence sensor with high affinity and selectivity for glucose" Presented at the 223rd ACS National Meeting, April 7-11, 2002, Orlando, Florida.

45) Yan, J.; Chen, Y.; Qu, R.; Wang, B. "A Novel Plant Enzyme That Degrades a Wide Range of Aromatic Compounds" Presented at the RTP Biochemistry and Enzymology 1st annual Spring Symposium - April 13, 2002.

46) Ballard, C. E.; Wang, B.; Yu, H.; and Boyle, P.D.; **"**A Carbohydrate Derivative Used as a Chiral Auxiliary in the Synthesis of α-Hydroxy Carboxylic Acids" Presented at the 116th North Carolina-ACS Sectional Conference, April 13, 2002, Durham, North Carolina.

47) Yang, W.; Gao, S.; Gao, s.; Karnati, V.V.R; Ni, W.; Hooks, W.B; Carson, J.; Weston, B. and Wang, B.; "Diboronic Acids as Fluorescent Sensors for Cells Expressing Sialyl Lewis X" Presented at the 28th National Medicinal Chemistry Symposium, San Diego, CA, June 8-12, 2002.

48) Wang, B. "Boronic Acid-based Fluorescent Sensors for Saccharides" invited lecture at the 28th National Medicinal Chemistry Symposium, San Diego, CA, June 8-12, 2002.

49) Yang, W.; Gao, S.; Gao, s.; Karnati, V.V.R; Ni, W.; Hooks, W.B; Carson, J.; Weston, B. and Wang, B.; "Diboronic Acids as Fluorescent Sensors for Cells Expressing Sialyl Lewis X" Presented at the 3rd Innovative Molecular Analysis Technology Symposium, Washington, D.C., July 8-10, 2002.

50) Yang, W.; Gao, S.; Gao, S.; Karnati, V.V.R; Ni, W.; Hooks, W.B; Carson, J.; Weston, B. and Wang, B.; "Diboronic Acids as Fluorescent Sensors for Cells Expressing Sialyl Lewis X" Presented at the 224th American Chemical Society national meeting, Boston, MA, August 18-22, 2002.

51) Wang, B. **"**Using Boronic Acid for the Construction of Antibody Mimics and Sensors for Cell-surface Saccharide Biomarkers" Presented at the NCI Unconventional Innovation Program, February 17-18, 2003, San Diego, CA

52) Ni, W.; Wang, B. "Nitrophenol-based boronic Acid compounds for Color Sensing of Diols," Presented at the 225th American Chemical Society national meeting, New Orleans, March 23-27, 2003.

53) Yan, J.; Springsteen, G.; Deeter, S.; Skeuse, C. Wang, B. "The Interactions between Boronic Acid and Diols-The Relationship between pKa, pH, and Binding Constants," Presented at the 225th American Chemical Society national meeting, New Orleans, March 23-27, 2003.

54) Yang, W.; Yan, J.; Springsteen, G.; Deeter, S.; Wang, B. "A Novel Type of Fluorescent Boronic Acid that Shows Large Fluorescence Intensity Changes upon Binding with a Diol in Aqueous

Solution at Physiological pH," Presented at the 225th American Chemical Society national meeting, New Orleans, March 23-27, 2003.

55) Wallin, R.; Yang, W.; Wang, B.; Sane, D.C. "Warfrin-Biotin as Bait for Warfrin Binding Proteins in the Endoplasmic Reticulum," Presented at the Experimental Biology 2003, San Diego, April 11-15, 2003.

56) Wang, B. "Fluorescent Sensors Targeted on Cell-Surface Saccharide Biomarkers" Presented at the 36th Higuchi Research Seminar, May 4-7, 2003, Lawrence, KS

57) Chen, X.; Yang, W.; Bruneau, A.; Wang, B.; Qu, R. "Induced Elimination of Summer Persistent Perennial Ryegrass," Presented at Molecular Breeding of Forage and Turf, the Third International Symposium, May 18-22, 2003, at Dallas, TX.

58) Yang, W.; Fan, H.; Gao,X.; Gao, S.; Karnati, V.; Ni, N.; Hooks, W.B.; Carson, J.; Weston, B. and Wang, B. "Boronic Acid-based Sensors for Cell-surface Carbohydrates," Presented at the International Symposium on Sensors Science, Paris, France, June 16-20, 2003

59) Chen, X.; Yang, W.; Bruneau, A.; Wang, B.; Qu, R. "Induced Elimination of Summer Persistent Perennial Ryegrass," Presented at the 7th International Congress of Plant Molecular Biology, June 23-28, 2003, Barcelona, Spain.

60) Wang, B. "Water Soluble Boronic Acid-based Spectroscopic Reporters for the Synthesis of Sensors for Cell-surface Carbohydrates" Presented at the Joint NCI-NASA Fundamental Technologies for Biomolecular Sensors Program, July 28-29, 2003, Chicago, Il.

61) Yang, W.; Gao, X.; Ni, W.; Yan, J.; and Wang, B. "Water Soluble Boronic Acid-based Spectroscopic Reporters for the Synthesis of Sensors for Cell-surface Carbohydrates" Presented at the Joint NCI-NASA Fundamental Technologies for Biomolecular Sensors Program, July 28-29, 2003, Chicago, Il.

62) Gao, X.; Zhang, Y.; Sankar, S.; Wang, B. "New Boronic Acid Fluorescent Reporter Compounds II. A Naphthalene-based sensor Functional at Physiological pH" Presented at the 226th American Chemical Society national meeting, New York, September 7-11, 2003

63) Wang, B. "Fluorescent Sensors for Saccharides", Young Supramolecular Chemists Workshop, Sanibel, Fl, January 10-14, 2004.

64) Fang, H.; Li, J.; Sun, Y.; Wang, B.; Zhang, Y. "A New Data Mining Tool for Analyzing Coumarin-based Prodrugs" Conference on Data Mining and Knowledge Discovery: Theory, Tools, and Technology, vol. 5433, pp. 142-152, Orlando, April, 2004.

65) Kaur, G.; Fang, H.; Wang, B. "The effect of electron withdrawing groups on diboronic acid based sensors" Presented at the 227th American Chemical Society national meeting, Anaheim, March 28-April 1, 2004.

66) Gao, X.; Zhang, Y.; Wang, B. "New Boronic Acid Fluorescent Reporter Compounds. A Naphthalene-based Ratio-metric Saccharide Sensor Functional at Physiological pH" Presented at the 227th American Chemical Society national meeting, Anaheim, March 28-April 1, 2004.

67) Ni, W.; Kaur, G.; Franzen, S.; Wang, B. "How Important Is the B-N Interaction in Regulating the Fluorescence Intensity in the Anthracence Boronic Acid System?" Presented at the 227th American Chemical Society national meeting, Anaheim, March 28-April 1, 2004.

68) Wang, B. "Sensors for Cell Surface Carbohydrate Biomarkers" Presented at the joint NASA-NCI FTBS meeting, Moneterey, CA, August 2-4, 2004

69) Zhang, Y.; Gao, X.; Wang, B. "Water-soluble fluorescent boronic acid compounds for saccharide sensing: Structural effect on their fluorescence properties," Presented at the 228th ACS National Meeting, Philadelphia, PA, August 22-26, 2004.

70) Craig, S.; Wang, B. "Diboronic Acids as Fluorescent Sensors for Cell-surface Carbohydrates," Presented at the Southeastern Regional Meeting of the American Chemical Society, November 10-13, 2004, RTP, NC.

71) Tang, Y.; Jin, B. Zhang, Y.Q.; Fang, H.; Wang, B. "Granular Support Vector Machines Using Linear Decision Hyperplanes for Fast Medical Binary Classification" Presented at FUZZ-IEEE-2005, May 22-25, 2005, Reno, Nevada.

72) Gao, X.; Zhang, Y. Wang, B. "A water-soluble and highly fluorescent naphthalene-based boronic acid compound for carbohydrate sensing at physiological pH" Presented at the 229th American Chemical Society National Meeting, San Diego, CA, March 13-17, 2005.

73) Yang, W.; Zhang, Y.; Yan, J.; Gao, X.; Gao, S.; Karnati, V.; Ni, W.; Fan, H.; Weston, B.; Carson, J.; and Wang, B. "Artificial lectins: boronolectins and fluorescent boronolectins" Presented at the Glycomics and Carbohydrates in Drug Development, Hilton La Jolla Torreys Pines, La Jolla, CA, March 21-22, 2005

74) Yan, J.; Jin, S.; Wang, B. "A New Redox-Sensitive Protecting Group for Boronic Acids" TPresented at the 230th American Chemical Society National Meeting, Washington, D.C., August 28-September 1, 2005.

75) Wang, B. "Boronic Acid-based Sugar Recognition" Frontiers of Organic and Bioorganic Chemistry, June 13, 2005, Tianjin, China

76) Wang, B. "Lectin Mimics" Carbohydrate Gordon Conferences, Tilton, NH, June 19-24, 2005

77) Lin, N.; Huang, Z.; Altier, C.; Johnston, L.; Carrasco, N.; Fang, H.; Yan, J.; Wang, S.; Wang, B. "Incorporation of boronic acid fluorescent reporters into DNA for aptamer selection" Presented at the 230th American Chemical Society National Meeting (Medicinal Chemistry Division), Washington, D.C., August 28-September 1, 2005.

78) Lin, N.; Huang, Z.; Altier, C.; Johnston, L.; Carrasco, N.; Fang, H.; Yan, J.; Wang, S.; Wang, B. "Incorporation of boronic acid fluorescent reporters into DNA for aptamer selection" Presented at the NCI-IMAT meeting, Washington, D.C., September 7-9, 2005.

79) Jin, B.; Zhang, Y. and Wang, B. "Evolutionary Granular Kernel Trees and Applications in Drug Activity Comparisons" 2005 IEEE Symposium on Computational Intelligence in Bioinformatics and Computational Biology (CIBCB2005), November 14-15, 2005, San Diego, CA

80) Yang, W.; Zhang, Y.; Yan, J.; Gao, X.; Gao, S.; Karnati, V.; Ni, W.; Fan, H.; Weston, B.; Carson, J.; and Wang, B. "Artificial lectins: boronolectins and fluorescent boronolectins" Presented at the 2005 Pacifichem Conference, Honolulu, Hawaii, USA, December 15-21, 2005.

81) Zou, W.; He, M.; Yue, P.; Zhou, Z.; Lin, N.; Lonial, S.; Khuri, F.R.; Wang, B.; Sun, S. "Vitamin C Inactivates the Proteasome Inhibitor PS-341 (Bortezomib) in Human Cancer Cells" Presented at the 2005 Pacifichem Conference, Honolulu, Hawaii, USA, December 15-21, 2005.

82) Wang, B, "Boronic Acid-based Fluorescent Sensors" Presented at the 2005 Pacifichem Conference, Honolulu, Hawaii, USA, December 15-21, 2005.

83) Gao, X.; Yang, W.; Zhang, Y. Yan, J.; Wang, J.; Wang, B. "Designing New Boronic Acid Reporters for the Synthesis of Fluorescent Sensors for Saccharides" Presented at the 2005 Pacifichem Conference, Honolulu, Hawaii, USA, December 15-21, 2005.

84) Lin, N.; Huang, Z.; Altier, C.; Johnston, L.; Carrasco, N.; Fang, H.; Yan, J.; Wang, S.; Wang, B. "Incorporation of boronic acid fluorescent reporters into DNA for aptamer selection" Presented at the 2005 Pacifichem Conference, Honolulu, Hawaii, USA, December 15-21, 2005.

85) Wang, J.; Jin, S.; Wang, B. "Synthesis and sugar binding studies of long-wavelength boronic acid fluorescent compounds based on the 4-amino-naphthalimide template" Presented at the 231rd American Chemical Society National Meeting, Atlanta, March 26-30, 2006 (Organic Division)

86) Zheng, S.; Reid, S.; Lin, N.; Wang, B. "Microwave-assisted synthesis of neopentylethynl arylboronates for the construction of boronic acid-based fluorescent sensors for carbohydrates" Presented at the 231rd American Chemical Society National Meeting, Atlanta, March 26-30, 2006 (Organic Division).

87) Zheng, S.; Lin, N.; Reid, S.; Wang, B. "Effect of conjugation with a phenylethynyl group on the fluorescent properties of water-soluble arylboronic acids" Presented at the 231rd American Chemical Society National Meeting, Atlanta, March 26-30, 2006 (Organic Division).

87) Akay, S.; Yang, W.; Lin, L.; Wang, B. "Synthesis of fluorescent benzo[b]thiophene boronic acid derivatives as carbohydrates sensors" Presented at the 231rd American Chemical Society National Meeting, Atlanta, March 26-30, 2006 (Carbohydrate Division).

88) Kaur, G.; Akay, S.; Wang, B. "Design and synthesis of boronic acid-based sensors for cell surface carbohydrate recognition" Presented at the 231rd American Chemical Society National Meeting, Atlanta, March 26-30, 2006 (Carbohydrate Division).

89) Yan, J.; Shan, J.; Kumar, A.; Boykin, D.W.; Wang, B. "Polyfuran-based long-wavelength fluorescent boronic acids for carbohydrate sensing" Presented at the 231rd American Chemical Society National Meeting, Atlanta, March 26-30, 2006 (Carbohydrate Division).

90) Yan, J.; Shan, J.; Kumar, A.; Boykin, D.W.; Wang, B. "Polyfuran-based long-wavelength fluorescent boronic acids for carbohydrate sensing" Presented at the 231rd American Chemical Society National Meeting, Atlanta, March 26-30, 2006 (Carbohydrate Division).

91) Zhang, Y.; Gao, X.; Chandrasekaran, S.; Fang, X.; Hardcastle, K.; Wang, B. "Understanding the mechanism of the fluorescent intensity changes of quinolineboronic acids upon sugar binding" Presented at the 231rd American Chemical Society National Meeting, Atlanta, March 26-30, 2006 (Carbohydrate Division).

92) Wang, B. "Lectin Mimics: Boronolectins and Fluorescent Boronolectins" Presented at the 231rd American Chemical Society National Meeting, Atlanta, March 26-30, 2006 (Carbohydrate Division).

93) Wang, S.; Shealey, S.; Wang, B. "Ionization pathways for arylboronic acids" Presented at the 2006 ASMS meeting, May 28-June 1, 2006, Seattle, Washington.

94) Wang, B. "Vitamin C: Is too much of a good thing a good thing?" Presented at the Second Annual Meeting on Frontiers in Organic and Bioorganic Chemistry, Shanghai, China, July 8-9, 2006.

95) Wang, B. "Developing Boronolectins as Pharmaceutical Agents" Presented at the 2006 Symposium on Organic Chemistry and Medicinal Chemistry, Lanzhou, China, July 10-11, 2006.

96) Wang, B. "Selective PDE4 Inhibitors" Presented at the 5th Biennial Chinese Medicinal Chemistry Symposium, November 2-7, 2006.

97) Wang, B. "Selective PDE4 Inhibitors for Asthma Treatment" Presented at Second MBD Day Symposium, Georgia State University, May 18, 2007.

98) Wang, B. "Selective PDE4 Inhibitors for Asthma Treatment" The 3rd Sino-US Chemistry Professors Conference, Wuhan, China, June 1-2, 2007

99) Wang, B. "Lectin Mimics for glycoprotein identification," presented at the 8th PI meeting of the IMAT program (NCI), July 24-25, 2007

100) Cheng, Y.F.; Ni, N.T.; Li, M.Y.; Chou, H.T.; Lu, C-D.; Wang, B. "Synthesis of AI-2 Antagonists to Inhibit Bacterial Quorum Sensing," Presented at the 2007 Georgia Life Summit, October 3, 2007

101) Ni, N.T.; Chou, H.T.; Wang, J.F.; Li, M.Y.; Lu, C.-D.; Tai, P.-C.; Wang, B. "Identification of Three Boronic Acids as Antagonists of AI-1 and AI-2-Mediated Bacterial Quorum Sensing in *Vibrio harveyi"* Presented at the 2007 Georgia Life Summit, October 3, 2007

101) Shan, J.; Li, M.; Tran, V.; Wang, B. "Design and synthesis of boronic acid-based sensors for dopamine" Presented at the 2007 Georgia Life Summit, October 3, 2007

102) Ni, N.; Choudhary, G.; Wang, B. "Pyrogallol and its analogs can antagonize bacterial quorum sensing in Vibrio harveyi" to be presented at the Spring 2008 American Chemical Society National Meeting, April 6-10, 2008

103) Cheng, Y.; Ni, N.; Li, M.; Chou, H-T.; Lu, C-D.; Tai, P-C.; Wang, B. "Synthesis and Biological Evaluation of Inhibitors of AI-2-Mediated Bacterial Quorum Sensing in Vibrio harveyi" to be presented at the Spring 2008 American Chemical Society National Meeting, April 6-10, 2008

104) Shan, J.; Zhu, C.; Wang, B. "Synthesis and Evaluation of α-Amidoboronic Acids for their Ability to Interact with Carbohydrates" to be presented at the Spring 2008 American Chemical Society National Meeting, April 6-10, 2008

105) Reid, S.; Belozerov, V.; Van Meir, E.G.; Wang, B. "Design and synthesis of small-molecule inhibitors of the HIF-1 pathway" to be presented at the Spring 2008 American Chemical Society National Meeting, April 6-10, 2008

106) Wang, B. "Carbohydrate Recognition and Sensing" Presented at the Joint International Symposium on Macrocyclic & Supramolecular Chemistry, Las Vegas, July 13-18, 2008

107) Wang, B. "Going after the "sweet spot" in Selecting DNA Aptamers for Glycoroteins" presented at the NIH Glycoarray Workshop, December 8, 2008

108) Wang, B. "Going after the "sweet spot" in Selecting DNA Aptamers for Glycoroteins" presented at the Glycobiology Gordon Conference, Ventura, CA, Jan. 18-23, 2009

109) Wang, B. "Selecting Boronic Acid Modified DNA Aptamers Capable of Differentiating Glycosylation Patterns in Glycoproteins" Glycan Microarray Technologies and Applications, Hilton La Jolla, California, March 14-16, 2009

110) Wang, B. "Using Boronic Acid-Diol/alcohol Interactions for the Selections of DNA Aptamers Capable of Differentiating Glycosylation Variations in Glycoproteins" to be presented at the Symposium on "*Synthetic Carbohydrate Receptor: Design and Applications"* at 237th ACS National Meeting, March 22-26, 2009

111) Wang, B. "Boronolectins and fluorescent boronolectins as potential research tools and diagnostics" to be presented at the Symposium on "*Glycodiagnostics: Receptor-based Strategy for Biosensing"* at 237th ACS National Meeting, March 22-26, 2009

112) Nanting Ni,[a] Xiaojing Wang,[a] Minyong Li,[a] Chaofeng Dai,[a] Gaurav Choudhary,[b] Yunfeng Cheng[a] and Binghe Wang "Structure-Binding Affinity Studies of Fibrinogen Aptamers"

Current Group

Ten graduate students (Weixuan Chen, Hanjing Peng, Danzhu Wang, Sushma Reddy Gundala, Yang Zhen, Suazzette Reid, Nanting Ni, Jerry Cheng, Sachin Patil, and Xiaochuan Yang), six post-doctoral research associates and visiting scientists (Chaofeng Dai, Lifang Wang, Shaoru Wang, Krishna Damera, and Bowen Ke), and three undergraduate (Angie Calderon, Hang Tran, and Carol Nga)

Students & Postdoctoral Fellows Mentored

i. Graduate Students

(1) Eric Ballard, Ph.D., 1997-2002; (2) Dawn Covington, M.S., 1997-1998; (3) Michelle Ferro, M.S., 1999-2003; (4) Kellee Griffin, M.S., 1999-2003; (5) Siska Hendrata, M.S., 1997-2000; (6) Ji Jiang, M.S., 1997-2000; (7) Rich Latta, Ph.D., 1998-2001; (8) Yuan Liao, M.S., 1995-2000; (9) Weijuan Ni, Ph.D., 1999-2003; (10) Bo Peng, M.S, 1999-2002; (11) Ratna Sen, M.S. 1996-1998; (12) Greg Springsteen, Ph.D., 1996-2002; (13) Wei Wang, Ph.D., 1996-2000; (14) Kun Wu, Ph.D., 1994; (15) Lindsay Zych, M.S., 1999-2002; (16) Jun Yan, Ph.D., 2000-2004; (17) Xinhui Lou, Ph.D., 2001-2003, (18) Haibo Li, Ph.D., 2001-2003, (19) Janet Jones, Ph.D., 2001-2007, (20) Sandra Craig, 2002-2007, (22) Ibrahim Bori, Ph.D., Chemistry, 2002-2003, (23) Gurpreet Kaur, Ph.D., Chemistry, 2002-2006, (24) Angela Mulder, Ph.D., Chemistry, 2002-2003, (25) Senol Akay, Ph.D. Chemistry, GSU, 2003-present; (26) Shan Jin, Ph.D. Chemistry, GSU, Jan 2005-May 2009; (27) Xiaochuan Yang, Ph.D. Chemistry, GSU, Jan 2005-present; (28) Suazette Reid, Ph.D. Chemistry, GSU, July 2005-present; (29) Nanting Ni, Ph.D. Chemistry, GSU, Jan. 2006-present, and (30) Yunfeng (Jerry) Zheng, Ph.D. Chemistry, GSU, August 2006-present; (31) Weixuan Chen, Ph.D. Chemistry, GSU, August 2007-present, (32) Hanjing Peng, Ph.D. Chemistry, GSU, Aug. 2007-present, (33) Yidan Liu, Aug. M.S. Chemistry, GSU, 2007-2009, (34) Sushma Reddy Gundala, M.S. Biology, GSU, Aug. 2007-present, (35) Anusha Kandukuri, M.S. Biology, GSU, August 2007; (36) Salma Stoman, M.S. Chemistry, GSU, August 2007-2008; (37) Gaurav Choudhary, M.S. Biology, GSU, 2006-2009; (38) Arpanan Chaudhary, Ph.D. Chemistry, GSU, May 2009-present; (39) Tran Hang, MS, Chemistry GSU, 2009-present.

ii. Research Personnel

(1) Young Ro Choi, Ph.D. December 1997-December 1998 (now Director, R&D Center, Kukje Pharma Ind. Co., Ltd. 648, Choji-Dong, Ansan-City, Kyunggi-Do, Korea (2) Xingming Gao,

Ph.D., August 2000-March 2004; (3) Wenqiang Yang., March 2000-June 2003.; (4) Daxian Shan, M.S., Research Fellow, November, 1994-September, 1998 (Now Research Scientist at Amgen, Thousand Oaks, CA); (5) Xuling Shi, Ph.D., October 1998-November 1999; (6) Terry Smith, Ph.D., Professor of Chemistry, University of Central Oklahoma, Visiting Professor, Summer 1995; (7) Wei Wang, M.S., Research fellow, October, 1994-1996; (8) Hongwu Yu, Ph.D. November 1998-2001; (9) Huijuan Zhang, B.S., Research Fellow, April 1995-March, 1997; (10) Ailian Zheng, M.S., Research Fellow, November, 1995-February, 1999 (Associate Professor, Institute of Materia Medica, Chinese Academy of Medical Sciences, Beijing, China), (11) Shouhai Gao, Ph.D., Postdoctoral fellow, October 1998-May, 2001, (12) Karnati V V Reddy, Ph.D., Postdoctoral fellow, March 1999-May 2001, (13) Xingming Gao, 1999-March 2005, (14) Yanlin Zhang, Ph.D., 2002-2006, (15) Hao Feng, Ph.D., 2002-December 2004, (16) Na Lin, Ph.D., 2003-2006, (17) Dajun Chen, Ph.D., 2003, (18) Shilong Zheng, 2003-September, 2007, (19) Gayane Khachvankyan, 2002, 2003-2004, (19) Jianzhang Zhao, 2005, (20) Jun Yan, 2005-April 2005; (21) Minyong Li, Jan 2006-April 2009; (22) Junfeng Wang, April 2005-July, 2007; (23) Lupei Du, March 2007-April, 2009; (24) Chaofeng Dai, December 2007-present; (25) Chunyuan Zhu, September 2007-December 2008; (26) Jin Hui, Jan. November 2007-2008; (27) Yong Chu, March 2008-Jan. 2009; (28) Chunhao Yang, August 2008-Jan 2009; (29) Shaoru Wang, October 2008-present; (30) Jianmin Cui, Feb. 2009-present; (31) Lifang Wang, Jan. 2009-present.

iii. Undergraduate students mentored

(1) Bau Tran, 1995-1996; (2) Sung Yong Bae, Summer 1999; (3) Suzanne Burlone, Summer 1999; (4) Summer Coller, Summer 1998; (5) Adama Connor, 1999-2000; (6) Joyce Eledah, 1996-1997; (7) Jennifer Elmo, 1997-1998; (8) Amanda F. Fuller, 1996-1997; (9) David Herzig, 2000-2001; (10) Jason F. Ho, 1998-1999; (11) Ming Li, 1997-1998; (12) Chris Mitton, Summer 1999; (13) Jason Peterson, 1994-1995; (14) Thao Pham, Summer 1995; (15) Amber Pittman, Summer 1999; (16) Miles Sweet, Summer 1999 (later a Rhodes Scholar at Oxford); (17) Reba

Royster, Summer, 2000; (18) Tara Elkin, Summer, 2001; (19) Kelly Pennix, summer, 200-2002, (20) Kim McNair, Summer 2001, (21) Harshit Bakshi, Fall 2001-2002; (22) John Adams, Fall 2001-2002; (23) Susan Deeter, Summer, 2002, (24) Faith Ohuoba, summer 2002, (25) Colleen Skeuse, 2002, (26) Andrea Allgood, 2002-present; (27) Marcus Lockhart, 2002-2003; (28) Jaime Curtis, summer 2003; (29) Susiana Mulyadi, May 2004-2005; (30) Gary E Brandt, May 2004-2005; (31) Seemie Syed, April 2005; (32) Mike Nguyen, July 2005-2006, (33) Tekla Kovash, August 2005-2006; (33) Vaibhav G Shah, Jan 2006-present; (34) Bo Peng, Fall 2006; (35) David Bello, Summer 2006-2007; (36) Nicole Youngs, Spring 2007; (37) ViLinh Thi Tran, Fall 2006-Spring 2007; (38) Phun Tham, Fall 2006-Spring 2007, (39) Tierra Demons, Fall 2006-Spring 2007; (40) Miyeong Jin, 2007; (41) Kyoung Su Lee 2007, (42) Nekelia Alashante Henderson 2007-2008; (43) Hang Tran, Fall 2008-present; (44) Angie Caldron, Fall 2008-present; (45) Carol Nga, Spring 2009-present; (46) Sara Tesfazghi, Spring 2009-present

iv. Students' Thesis/Dissertation Committees

(1) Michael William Bauer, Chem. Eng., Ph.D., NCSU, 1997; (2) Sophie Binet, Chemistry, Ph.D., NCSU, 1996-2000; (3) Dawn Covington, M.S., 1997-1998; (4) Alan Fulp, Chemistry, Ph.D., NCSU, 1996-2000; (5) Holly Homer, M.S., Chemistry, 1999-2000; (6) Charles Ingalls, Chemistry, M.S., NCSU, 1997-1999; (7) Ji Jiang, Chemistry, M.S., NCSU, 1997-2000; (8) Debbie Kaufman, Chemical Engineering, Ph.D., NCSU, 1996-2000; (9) Yuan Liao, Chemistry, M.S., NCSU, 1996-2000; (10) Sachin G. Maniar, M.S., NCSU, 1998-2000; (11) Cheryl McArdle, Chemistry, M.S., NCSU, 1996-1998; (12) Mark Miller, M.S., NCSU, 1998-2000; (13) Christian G. Ollinger, M.S., Chemistry, 1999-2000; (14) Sue Quick, Wood & Paper Science, M.S., NCSU, 1999; (15) Ratna Sen, M.S. 1996-1998; (16) Birol Umer, Paper Sciences, Ph.D., NCSU, 1997-2000; (17) Wei Wang, Chemistry, Ph.D., NCSU, 1996-2000; (18) Kun Wu, Ph.D., Medicinal Chemistry, University of Oklahoma, 1994; (19) Wei Xu, Ph.D., Fiber and Polymer Sciences, NCSU, 1998-2000; (20) Pingao Yu, Mech. Eng., Ph.D., NCSU, 1996-1999; (21) Yanchen Zhang, Chemistry, M.S., NCSU, 1997-2001; (22) Siska Hendrata, M.S., 1997-2001; (23) Rich Latta, Ph.D., 1998-2001; (24) Li Ma, M.S., NCSU, 1997-2001; (25) Yuyu Bai, Crop

Science, Ph.D., NCSU, 2000-2001; (26) Greg Springsteen, Ph.D., NCSU, 1996-2002; (27) Eric Ballard, Ph.D., 1997-2002; (28) Clint Brooks, Chemistry, Ph.D., NCSU, 1996-2001; (29) Scott Burns, Chemistry, Ph.D., NCSU, 1998-2002; (30) Qizhou Dai, Paper Sciences, Ph.D., NCSU, 1997-2002; (31) Michelle Ferro, M.S., 1999-2002; (32) Brandon Fetterolf, M.S., Chemistry, 1999-2002; (33) Kellee Griffin, M.S., 1999-2003; (34) Ningning M.S., Ph.D., Department of Chemistry, NCSU, 1999-2002; (35) Lindsay Zych, M.S., Chemistry, NCSU, 1999-2002; (36) Hui Ouyang, Ph.D., Pharmaceutics, UNC-CH, 1999-2001; (37) Hai Bui, Chemistry, PhD, 1999-2003; (38) Weijuan Ni, Ph.D., 1999-present; (39) Dimitar Gotchev, Ph.D., Department of Chemistry, NCSU, 1999-2003; (40) Anne-Cecile Hiebel, Ph.D., Department of Chemistry, NCSU, 2000-2003; (41) Huan Xie, Ph.D., Department of Chemistry, NCSU, 2001-2003; (42) Kelly Stevens, Food Science, 2001-2003; (43) Jason Nolan, Ph.D., Department of Chemistry, NCSU, 2001-2003; (44) Damiam Young, Ph.D., Department of Chemistry, NCSU, 2001-2003; (45) James Dixon, Ph.D., Department of Chemistry, NCSU, 1999-2003; (46) Xinhui Lou, Ph.D., Department of Chemistry, NCSU, 2001-2003, (47) Haibo Li, Ph.D., Department of Chemistry, 2001-2003; (48) Ibrahim Bori, Ph.D., Chemistry, 2002-2003, (49) Yang Shen, Ph.D., Chemistry, 2003; (50) Steve McCall, Chemistry, NCSU, 2003; (51) Cexiong Fu, Chemistry, NCSU, 2003, (52) Tong Wu, Chemistry, NCSU, 2003, (53) Angela Mulder, Ph.D., Chemistry, NCSU, 2002-2003; (54) Weijuan Ni, 1999-2003, Ph.D. Department of Chemistry, NCSU; (55) Seongwon Hong, Ph.D., College of Pharmacy, University of North Carolina, Chapel Hill, 2002-2004; (56) Jun Yan, Ph.D., Department of Chemistry, NCSU, 2000-2004, (57) Beth Wilson, Ph.D., GSU, 2003; (58) Darshak Patel, M.S., GSU, 2004; (59) Regan LeBlanc, Ph.D., 2005; (60) Prashanth Athri, Ph.D., GSU, 2005-2006; (61) Meena Dowlut, Ph.D., University of Alberta, 2006; (62) Gurpreet Kaur, GSU, Ph.D., Chemistry, 2002-2006; (63) Osbourne Quaye, GSU, Ph.D., Chemistry, 2006; (63) Ning Chen, Ph.D., GSU, 2006; (64) Yun Huang, Ph.D., GSU, 2006; (66) Janet Jones, Ph.D., GSU, Chemistry, 2001-2007, (67) Sandra Craig, Ph.D., GSU, Chemistry, 2002-2007; (68) Sarah Shealy, Ph.D., GSU, Chemistry, 2007; (69) Jun He, Ph.D., GSU, Chemistry, 2007; (70) Jun Seok Kim, Ph.D., GSU, Chemistry, 2007; (71) Nga Ta, M.S., GSU,

Biology, 2008; (72) Shan Jin, Ph.D. GSU, Chemistry, 2005-2009, (73) Seno Akay, Ph.D, GSU, 2003-present; (74) Xiaochuan Yang, Ph.D. Chemistry, GSU, 2005-present; (75) Suazzette Reid, Ph.D., 2005-present; (76) Nanting Ni, Ph.D., 2006-present, (77) Yunfeng (Jerry) Cheng, 2006-present; (78) Weixuan Chen, Ph.D., GSU, Chemistry, 2007-present; (79) Hanjing Peng, Ph.D., GSU, Chemistry, 2007-present; (80) Kevin Francis, Ph.D. 2007-present; (81) Jiang Wu, Ph.D. GSU, Chemistry, 2008-present; (82) Bin Wang, Ph.D. GSU, Chemistry, 2008-present; (83) Shirlene Jackson-Beckford, Chemistry, Ph.D., GSU, 2008-present; (84) Rong Fu, Chemistry, Ph.D. GSU, 2008-present; (85) Yidan Liu, Chemistry, MS, GSU, 2007-2009; (86) Manindar Kaur , Ph.D. GSU, 2009-present.

Professional Membership

1) American Chemical Society
2) American Association for the Advancement of Sciences
3) American Association of Colleges of Pharmacy (1995-1996)
4) American Peptide Society (1995-98)
5) Kappa Psi Pharmaceutical Fraternity
6) Psi Lambda Upsilon Honor Society in Chemistry
7) Rho Chi Pharmacy Honor Society
8) Sigma Xi
9) Phi Kappa Phi Honor Society

Other Experiences

Departmental/College Level Services

1) 1995-96, Member of Pharmacology & Toxicology New Faculty Search Committee, College of Pharmacy, University of Oklahoma Health Sciences Center.
2) 1995-96, Member of Medicinal Chemistry New Faculty Search Committee, College of Pharmacy, University of Oklahoma Health Sciences Center.

3) 1994, Member of University of Oklahoma College of Pharmacy Curriculum Committee, Electives Subcommittee.

4) 1995-1996, Member of University of Oklahoma College of Pharmacy Dissertation Review Committee.

5) 1996-2001, Member of Graduate Recruitment & Admissions Committee, Department of Chemistry, North Carolina State University.

6) 1996-1997, Member of Seminar Committee, Department of Chemistry, North Carolina State University.

7) 1996-1998, Member of Graduate Awards & Faculty Nomination Committee, Department of Chemistry, North Carolina State University.

8) 1996-1998, Member of X-Ray Users Committee, Department of Chemistry, North Carolina State University.

9) 1998-2000, Safety and Security Committee, Department of Chemistry, North Carolina State University.

10) 1998-Present, Teaching Resources Committee, Department of Chemistry, North Carolina State University.

11) 1998-Present, Undergraduate Scholarships and Awards Committee, Department of Chemistry, North Carolina State University.

12) 1998-2000, member of the College of Physical and Mathematical Sciences Dean's Advisory Council.

13) 1999-2002, Director, Honors Program, Department of Chemistry, North Carolina State University.

14) 2002-2003, Member, Faculty Search Committee, Department of Chemistry, North Carolina State University.

15) 2003-2004 (chair), 2004-2005 (Chair), 2005-2006 (Chair), Faculty Search Committee, Department of Chemistry, Georgia State University.

16) 2003-present, Department Seminar Committee, Department of Chemistry, Georgia State University.

17) 2007-2008, New Faculty Search Committee, Department of Chemistry, Georgia State University

18) 2006, Member (elected) of chair evaluation committee, Department of Chemistry, Georgia State University

18) 2005-present, Eminent Scholar Search Committee (Biology), College of Arts and Sciences, Georgia State University

19) 2007-present, Executive Committee (Elected), Department of Chemistry, Georgia State University

20) 2009, Member (elected) of chair evaluation committee, Department of Chemistry, Georgia State University

University Level Services

1) 1995-1996, Member of University Research Council, University of Oklahoma Health Sciences Center.

2) 1995-1998, Member of Graduate College Graduate Faculty Appointments Committee, University of Oklahoma Health Sciences Center.

3) 1995, Member of University of Oklahoma Health Sciences Center Multi-Culture Award Selection Committee.

4) 1995-1996, Member of the University of Oklahoma Health Sciences Center Graduate Education and Research Day Committee

5) 1996, Member of Summer Undergraduate Research & Education Program Selection Committee, University of Oklahoma Health Sciences Center.

6) 1994-1996, Faculty Leadership Program, College of Pharmacy, University of Oklahoma Health Sciences Center.

7) 1997-1998, University-Wide Genomic Science Center Steering Committee, North Carolina State University.

15) 2000-2003, University Standing Committee on International Programs, North Carolina State University.

16) 2005-2007, University Intellectual Property Committee, Georgia State University.

17) 2008, University Presidential Search Committee, Georgia State University

18) 2008, Organizer, Center for Diagnostics and Therapeutics (Preparatory), Georgia State University

Professional Services

1) Officers and Advisory boards: (1) 1995, Chairman, American Chemical Society, Oklahoma Section; (2) 2002-2004, Member, Long-rang Planning Committee, American Chemical Society, Division of Medicinal Chemistry; (3) 2004-present, Advisory Committee member, Center for Cancer Research and Therapeutic Development (CCRTD), Clark Atlanta University (4) 2005-Present, Scientific Advisory Board, National Key Lab of Natural and Biomimetic Drugs, Beijing University; (5) Member of Scientific Advisory Group, Georgia Research Alliance Statewide

Biotech Initiative (Vaccines and Therapeutics), 2005-2007; (6) Georgia Cancer Coalition Scientific Review Advisory Board, 2005-present.

2) Reviewer for (1) *J. Am. Chem. Soc.; (2) Proc. Nat. Acad. Sci.; USA;* (3) *Angew. Chemie Int. Ed.; (4) J. Pharm. Sci.;* (5) *Bioorg. Med. Chem.;* (6) *J. Peptide Res.;* (7) *Bioorg. Med. Chem. Lett.*; (8) *Pharm. Res.*; (9) *J. Org. Chem.*; (10) *J. Med. Chem.*; (11) *Macromolecule*; (12) *J. Poly. Sci.*; (13) *Curr. Med. Chem.*; (14) *Org. Lett.*; (15) *Tetrahedron*; (16) *Tetrahedron Lett.*; (17) *J. Controlled Release*; (18) *Synthesis*; (19) *European J. Pharm. Sci.*; (20) *J. Heterocycl. Chem.*; (21) *J. Pharm. Biomed. Anal.*; (22) *Austra. J. Chem.*; (23) *J. Phys. Chem.*; (24) *J. Comb. Chem.*; (25) *QSAR and Combinatorial Science*; (26) *Int. J. Pharm.*; (27) *Chem. Commun.*; (28) *Molecules*; (29) *J. Fluorescence*; (30) *Bioorg. Chem.;* (31) *New J. Chem.;* (32) *Sensors & Actuators; (33) J. Mater. Chem.;* (34) *Anal. Chim. Acta; (35) J. Inorg. Biochem.;* (36) *J. Photochem. Photobiol;* (37) *Biochemistry; (38) ChemBioChem; (39) Cancer Lett.;* (40) *Drug Discovery Today*; *(41) J. Mol. Graph. Model*; (42) *J. Heterocyclic Chem.;* (43) *Synlett*; (44) *Chem. Biol. Drug Design*; (45) *Lett. Drug Design Disc.*; (46) *Anal. Chim. Act.; (46) Biomacromolecules; (47) Cancer Lett.* (48) *Bioconjug. Chem.;* (49) *J. Phys. Chem.;* (50) *Carbohydrate Res.;* (51) *Sensors*; (52) *J. Inclus. Phenom. Macrocyc. Chem.*; (53) *Appl. Spectroscopy*; (54) *Langmuir;* (55) *Org. Biomolec. Chem.;* (56) *J. Mol. Recogn.*; (57) *J. Austr. Chem.; (57) J. Mol. Graph. Model.;* (58) *Chem.-A Asian J.;* (59) *Chem.-A Europ. J.*; (60) *Supramolecular Chem.,* (61) *Mol. Pharmaceutics,* (62) *Analytical Chem.;* (63) *Mini-Rev. Org. Chem.;* (64) *Mini-Rev. Med. Chem.*; (65) *Microbiology*

3) Grant reviewer for (1) *Research Corporation;* (2) *Petroleum Research Fund* (American Chemical Society); (3) *National Science Foundation*; (4) *National Institutes of Health* (Study Section on Innovative Technologies for the Molecular Analysis of Cancer, March and November 2002, March 2005, November 2005, June 2006, March 2007); Study Section on Novel Technologies for the Noninvasive Detection, Diagnosis and Treatment of Cancer, May 2002; Postdoctoral Fellowship, May 2003; Study Section on *Drug Development and Delivery* (Biophysical and Chemical Sciences), November 2003 and November 2004; Study Section on Cooperative Research for the Development of Vaccines, Adjuvants, Therapeutics, Immunotherapeutics and Diagnostics for Biodefense and SARS, February 3-5, 2004; Study Section on Synthetic and Biological Chemistry (BCMB), July 2005; Study Section on Cooperative Research Partnerships for Biodefense, Feb., 2006, April 2007; Study Section on *In Vivo* Cellular and Molecular Imaging Centers (ICMICS), November 14-15, 2006; Study Section on Cancer Biomarkers, June 10-11, 2008 (mail); Study Section on Postdoctoral fellowships (Biological Chemistry & Macromolecular Biophysics (BCMB)), June 26, 2008; Study Section on Cellular Probes, July 29, 2008; Study Section on Cancer Diagnostic and Treatment SBIR/STTR, October 2008, March 2009; Recovery Act Challenge Grants: 2009/10 ZRG1 BCMB-P (58), 2009/10 ZRG1 BST-M (58), 2009/10 ZRG1 CB-N (58); NIAID Special Emphasis Panel (P01, ZAI1 LR-M); (5) *Research Council of Canada*; (6) The South Dakota EPSCoR; (7) Engineering and Physical Sciences Research Council, UK; (8) Chang-Jiang Scholar Fund, Ministry of Education, China; (9) North Carolina Biotechnology Center; (10) Israel Science Foundation; (11) Natural Science Foundation of China

4) Editorial board services: (1) 2001-present, Editor-in-Chief, *Medicinal Research Reviews;* (2) 2004-presetn, Chief Editor, Wiley Series in Drug Discovery and Development; (3) 1999-2002 (resigned), Member of Editorial Advisory Board, *Current Medicinal Chemistry*; (3) September 2002-2008 (resigned), Member, Editorial Board, *Letters in Drug Design & Discovery*; (4) Since January 2005, Member of Editorial Board, *Acta Pharmaceutica Sinica;* (5) Editorial Board

member, *Chemical Biology and Drug Design*, Since June 2005; (6) Editorial Board Member, *J. Chin. Pharm. Sci.* since December 2006.

5) Meeting and symposium organization and services: (1) September 2001, Chair, Symposium on Biosensor, 53rd Annual Meeting of the Southeastern Region of the American Chemical Society (SERMACS), September 23-26, 2001; (2) 2002, Chair, Chemical Sensors in Drug Discovery, 28th National Medicinal Chemistry Symposium, June 8-12, 2002, San Diego, CA; 2002, (3) Session Chair on Kinases, Phosphatases, and Integrins, Division of Medicinal Chemistry, 224th ACS National Meeting, Boston, August 18-22, 2002; (4) Member, Organizing Committee (The other members are Chris Lipinski, Ed Kerns, Ron Borchardt, Dhiren Thakker), Workshop on Pharmaceutical Profiling in Drug Discovery for Lead Selection, jointly sponsored by the American Association of Pharmaceutical Scientists and the American Chemical Society-Medicinal Chemistry Division, May 2003; (5) 2004 SERMACS undergraduate presentation judge, November 16, 2003; (6) Co-Organizer and Co-chair, *Progress of Chinese American Chemists in Academia*, at the 226th American Chemical Society National Meeting, New York, September 2003; (7) Organizer and Chair, *Recent Progress in Diabetes Research*, 227th American Chemical Society National Meeting, Anaheim, March 2004; (8) Organizing Committee, 2nd Georgia State University Biotechnology Symposium, 2004; (9) Organizing Committee, the First Sino-US Chemistry Professors Symposium (Organic and Bioorganic Chemistry), Tianjin, China, June 13-14, 2005; (10) Chair and Organizing Committee member, Symposium on Boronic Acid held at the 2005 Pacifichem, December 13-19, Hawaii; (11) Co-chair and Co-organizer (with Geert-Jan Boons of UGA), Symposium on Carbohydrate Recognition held at the 231st ACS National Meeting, March 26-30, 2006, Atlanta, GA; (12) Organizing Committee, The Second Sino-US Chemistry Professors Conference (Organic and Bioorganic Chemistry), Shanghai China, July 8-10, 2006; (13) Organizing Committee Member, Lanzhou International Symposium on Medicinal and Organic Chemistry, July 11-12, Lanzhou, China; (14) Organizing Committee, The 5th International Symposium for Chinese Medicinal Chemists, November 2-7, 2006, Nanjing, China; (15) Organizing Committee, The Third Sino-US Chemistry Professors Conference (Organic and Bioorganic Chemistry), Wuhan, China, June 1-2, 2007; (16) Organizing Committee, The Fourth Sino-US Chemistry Professors Conference (Organic and Bioorganic Chemistry), Beijing, China, June 12-13, 2008; (17) Organizing Committee, 2009 Georgia Cancer Coalition Cancer Symposium; (18) Chair,Organizing Committee, Boronic Acid Symposium, 2010 PacifiChem, December 15-20, 2010 (planning phase); (19) Chair, Organizing Committee, Symposium on Carbohydrate Recognition, 2010 PacifiChem, December 15-20, 2010 (planning phase).