

Kirpal Singh Bisht

Achievements

- **100+** scientific papers and reviews published in internationally recognized journals such as "Journal of the American Chemical Society", "Macromolecules", "Biomacromolecules", "Tetrahedron", "Tetrahedron Asymmetry", "Phytochemistry", "Journal of Organic Chemistry", "Journal of the Chemical Society: Chemical Communications", "Pure and Applied Chemistry", "Indian Journal of Chemistry", "*Bioorganic and Medicinal Chemistry Letters*", etc.
- **9** proceedings abstract at scientific meeting and symposia.
- **26** presentations at Conferences/Symposia.
- **6** US patents and invention disclosure.

Research Interests

- **Organic Synthesis:** *Synthesis of compounds of importance in the medicinal and agricultural fields*
Biotransformations: Use of enzymes in non-aqueous environments
Stereocontrolled synthesis
Natural products: Phytochemical Investigation of Medicinal Plants and Marine Algae
Identification and structure elucidation: Nuclear magnetic Resonance (1D and 2 D Experiments); Infrared Spectroscopy; Mass Spectroscopy.
- **Polymer Science and Material Chemistry:** *Synthesis and Properties of Novel Functional Polymers*
Optically Active Polymer
Biodegradable Polymers for Biomedical and Environmental Application
Enzyme-Catalyzed Polymer Synthesis.

Experiences

Associate Professor, Department of Chemistry August 2004 to present
University of South Florida, Tampa, FL

Assistant professor , Department of Chemistry Aug' 1998 to July 2004
University of South Florida, Tampa, FL

Post-Doctoral Researcher with Prof. Richard Gross, Department of Chemistry Oct '95-July '98
University of Massachusetts, Lowell.

Research Scientist with Prof. Virinder S Parmar, Department of Chemistry June' 95-Sept' 95
University of Delhi, Delhi, India

Visiting Fellow in the Laboratory of Professor Dr. PM Boll, Department of Chemistry September' 93
Odense University, Odense, Denmark

Visiting Fellow in the Laboratory of Professor DHG Crout, Department of Chemistry Aug' 92-Oct' 92
University of Warwick, Coventry, UK

Education

1990-1995 University of Delhi Delhi, India

- **PhD** in organic chemistry on Thesis entitled "Lipase-mediated transesterifications and phytochemical investigations of *Piper clarkii* and *Piper wightii*" (Supervisor: Professor VS Parmar).

1988-1990 University of Delhi Delhi, India
 ■ **MS** in Organic Chemistry

1985-1988 University of Delhi Delhi, India
 ■ **BS (Hons.)** in Chemistry

Honors and Awards

- **Editorial board of *Organic Chemistry International***
- **Outstanding Undergraduate Teaching Award** of the University of South Florida, 2003.
- **2003 Presidential Green Chemistry Award** for postdoctoral research.
- **Established Researcher Award** of the University of South Florida, 2003.
- **Creative Research and Scholarship award** of the University of South Florida, 1999.
- **Junior Research Fellowship (JRF)** of the Danish International Development Agency (DANIDA, Denmark) during Aug' 90-Nov' 90.
- **Junior Research Fellowship (JRF)** of the Council of Scientific and Industrial Research (CSIR, India) during Dec' 90-Nov' 92.
- **Senior Research Fellowship (SRF)** of the Council of Scientific and Industrial Research (CSIR, India) during Dec' 92-May' 95.
- **Visiting fellowship of the British Council** to the University of Warwick, Coventry, UK; Aug'92-Oct'92;
- **Visiting fellowship of the Danish International Development Agency (DANIDA, Denmark)** to the Odense University, Odense, Denmark; September 1993.
- **Invited Speaker** of the International Symposium on "Trends in Medicinal Chemistry and Biocatalysis" at New Delhi, India on January 26-29, 2000;
- **Invited speaker** of the 220th National Meeting of the American Chemical Society at Washington, DC on August 20-24, 2000;
- **Featured research article** in the journal INQUIRY published by the Research Council, USF, spring 2000;
- **USF nominee for the ORAU Ralph E. Powe Junior Faculty Award**, January 2000;

Students Supervised

Graduate students:

- Dr. Talal Al-Azemi, Ph.D. awarded Fall 2002 "Synthesis and characterization of novel biodegradable polymeric materials". Accepted a position as Assistant Professor of Chemistry at Dept. of Chemistry, Kuwait University, Kuwait.
- Dr. Jason Carr, PhD. Awarded Summer 2004 "The Utilization of Enzymes in the Synthesis and Modification of Natural and Non-Natural Compounds: A Chemo-Enzymatic Approach to Enantiomerically Pure Compounds".
- Dr. Eric Dueno, Ph.D. awarded Summer 2004 "Design synthesis and application of polyhydroxy functionized cavitands". Accepted a position as Assistant professor of chemistry at Department of chemistry, University of Eastern Kentucky in Lexington, KY.
- Ms. Heather Velez, MA awarded Fall 2002 "Targetted Drug Delivery". Staff Scientist at the Forensic laboratory of the Florida Department of law enforcement, Tampa, FL.
- Ms. Surbhi Bhatt, MS 2006- "Chemo-enzymatic Route to synthesis of Biodegradable Polymers and Glycolipid Analogs" Research Scientist GeoPharma, Largo, FL
- Mr. Sumedh Parulekar, MS 2006" A novel approach to manipulate cavity size in resorcinarenes" - Research Scientist Albany Molecular, NY
- Ms. KiranKirti Muppala, MS 2007 "Functionalization of resorcinarenes and study of microbial activity" Research Scientist, Pfizer, Cambridge, MA
- Dr. Pasha Khan, PhD awarded fall 2008 "Application of Pd Catalyzed Alkylation: Synthesis of Bicyclic Furans, Isoxazolines and New Cyclopentane Amino Acid Analogs" Accepted a postodctoral position at Burnham Institute for Medical Research, Orlando, FL.
- Dr. Ruzhi Wu, PhD awarded Spring 2009 "Enzymatic and Chemical synthesis of polyesters and polycarbonates derived from L-tartaric acid and synthesis of polycarboante initiated by cavitands" PostDoctoral Fellow at University medical Center, Luisiana state university, New Orleans, LA.

- Ms. Wen-shan Chang, MS 2010. "Use of Model Compounds to Study Potential Removal of Pharmaceuticals Using Octolig®". (Co-Major Professor: Dean F. Martin)
- Dr. Meghnath Gali, PhD awarded summer 2011 "Synthesis of Small Molecule Inhibitors of Janus Kinase 2, Phosphodiesterase IV, GABA_A and NMDA receptors: Investigation of McMurry, Mannich and Chemoenzymatic Strategies".
- Mr. Kerry Keertikar, PhD Student
- Mr. Ali Hussain, MS thesis- "Synthesis of Functionalized Resorcin[4]arene via Click Chemistry" in 2010; PhD Student
- Mr. Arthur Maknenko, PhD Student.

Post Doctoral Fellows:

Dr. Emam Kassab, Visiting professor from the Technical Institute, Cairo, Ezypt.

Dr. Leelakrishna Kondaveti, Reserch Sceintist at Pharm-Eco, a Johnson Matthey Pharma Services, Devens, MA.

Dr. Pratap Chand, Research Scientist at Biocon Research Laboratories, Hyderabad, India.

Prof.. Talal F. Al-Azemi, Kuwait University, Kuwait; Visiting Scientist 2007-2008 and 2014-2015.

Undergraduates Students: (More than 45 undergraduate Students have done resrech in my reserch laboratories, CHM 4970).

- Ms. Sabnam Tehrani, BS (Hons) in Spring 2004 "Synthesis of novel resorcinarenes".
- Ms. Laura Henchey, BS (Hons) in Spring 2004 " Synthesis of Carbohydrate Macrolactone ". PhD from the Department of Chemistry at New York University.

Teaching Experience

- 1) Taught 'Organic Chemistry for Non chemistry Majors' (CHM 2200), Spring 1999 Class enrollment ~ 22 students), Spring 2000 (Class enrollment ~ 20 students), and spring 2001 (Class enrollment ~ 14 students)
- 2) Taught 'Spectroscopic Identification of Organic Compounds' (CHM 4932/6838), Fall 1999 (Class enrollment ~ 20 students), Fall 2000 (Class enrollment ~ 28 students), Fall 2001 (Class enrollment ~ 13 students) Fall 2003 (Class enrollment ~ 27 students), Fall 2005 (Class enrollment ~ 25 students) and Fall 2006 (Class enrollment 27 students)
- 3) Taught 'Organic Chemistry-I' (CHM 2210), Summer 2000 (Class enrollment ~ 114 students), Summer 2001 (Class enrollment ~ 140 students), Spring 2002 (Class enrollment 160 students), Summer 2002 (171 students), Fall 2002 (Class enrollment 68 students), Spring 2004 (Class enrollment 234 students), Summer 2004 (Class enrollment 178 students). Fall 2004, Spring 2005, Summer 2005, and Spring 2006.
- 4) Taught 'Introduction to materials Chemistry' (CHM 5931), Spring 2002 (class enrollment- 5 students).
- 5) Taught 'Chemistry Colloquium' (CHM 6936), Fall 2002 (class enrollment- 16 students) and Spring 2003 (Class enrollment ~ 12 students)
- 6) Taught 'Organic Chemistry-II' (CHM 2211), Spring 2003 (Class enrollment-179 students) and Summer 2003 (Class enrollment ~ 167 students)
- 7) Taught Chemistry in the premedical Summer enrichment program (PSEP) 2003, 2004, and 2005 at the college of medicine, University of South Florida.

New Courses Developed

Introduction to Materials Chemistry (CHM 4932), an upper level undergraduate course for Chemistry, Physics and Engineering majors has been developed together with two other colleagues, Drs. Julie Harmon and Mike Zaworotko. The course focuses on synthesis, processing, structure, bonding, and physical and chemical properties of polymers. While the traditional focus of many chemistry courses has been on small molecules; this course emphasizes macromolecular structures and self-assembly, emphasizing their applications in our technological society.

Invited Lectures

1. "A Chemoenzymatic approach to medicinal compounds/materials" Department of Chemistry, Kuwait University, November 16, 2009.
2. "Biocompatible Polymers- Synthesis and Property Modulation" Department of Chemistry, Kuwait University, November 11, 2009.

3. "Ring-opening polymerization of a seven-membered cyclic carbonate derived from tartaric acid" 238th ACS National Meeting, Washington, DC, August 19th 2009.
4. "Biocompatible Polymers- Synthesis and Property Modulation" at the Department of Polymer Science, University of Southern Mississippi Feb 4th, 2009.
5. "Synthetic chemistry- A lesson in selectivity" at the Department of Chemistry, Acadia University, Canada, Nov 8th 2007.
6. "Synthetic chemistry- A lesson in selectivity" at the Department of Chemistry, Dalhousie University, Canada, Nov 7th 2007.
7. "Synthetic Chemistry-An Enzymatic Approach" at the Department of Chemistry, Mt Allison University, Canada. Nov 6th 2007.
8. "Selectivity in Organic Synthesis: A Biocatalytic Approach" at the Department of Chemistry, University of Delhi, India, June 18, 2007.
9. "Selectivity in Organic Synthesis: A biocatalytic approach" FAME 2007, Orlando, FL, May 11, 2007.
10. "Biocatalysis: Exploiting Selectivity of lipases" Sukant Tripathy memorial Symposium 2006 Lowell Massachusetts Dec 1, 2006
11. "Environmentally friendly polymer synthesis" at the Environmental Research Interdisciplinary Colloquium (ERIC) Departments of Environmental & Occupational Health, Civil & Environmental Engineering, and Environmental Science & Policy on October 25th 2006.
12. "Organic Synthesis: A biocatalytic approach" Departmental Seminar at University of Tampa, Florida on November 19th 2004.
13. "Enzymatic Catalysis in Synthesis of Chiral and Functional Macromolecules. IUPAC international Conference on Biodiversity and Natural Products: Chemistry and Medicinal Applications at New Delhi, India on January 26-31, 2004."
14. "Chemoenzymatic synthesis of enantioenriched substituted polycaprolactones." 226th National Meeting of the American Chemical Society in New York City, September 10th, 2003.
15. "Enzymatic approaches to organic/polymer synthesis" Organic Seminar at Department of Chemistry and Biochemistry, Florida State University, FL on September 19th, 2002.
16. "Enzymatic Synthesis of Novel Biodegradable Polymeric Materials" Annual Florida Organic Chemistry Faculty Conference, Saturday, March 23, 2002, University of South Florida.
17. "Chiral polyesters by *in-vitro* enzymatic catalysis". 223rd National Meeting of the American Chemical Society at Orlando, FL on April 7-11, 2002.
18. "Enzymes as Novel Catalyst for Functional Polymers" Florida Annual Meeting and Exposition 2001 (FAME) of the Florida Section of the American Chemical Society at Orlando, FL on May 11-12, 2001.
19. "Biocatalytic Routes to Functional Polymers" International Symposium on Trends in Medicinal Chemistry and Biocatalysis, January 26-29, 2000, New Delhi, India.
20. "Functional Polycarbonate Synthesis: Enzymatic Approach". 220th National Meeting of the American Chemical Society, August 20-24, 2000, Washington, DC
21. "New Strategies for using Enzyme-Catalyzed Ring-Opening Polymerizations" 1999 16th Annual Florida Organic Chemistry Faculty Conference, February 27, Tampa, Florida, USA..

Professional Level Service

I serve as Academic Advisor to the **Alpha Epsilon Delta honor society's** Florida USF chapter and as a scientific referee for following international journals and funding agencies:

- (a) Journal of the American Chemical Society
- (b) Journal of Organic Chemistry
- (c) Macromolecules
- (d) Organic Letters
- (e) Biomacromolecules
- (f) Tetrahedron Letters
- (g) Chemical Reviews
- (h) ACS book reviews
- (i) Civilian Research and Development Foundation
- (j) United States Department of Agriculture
- (k) Macromolecular Bioscience

- (l) Biotechnology and Bioengineering
- (m) Tetrahedron Asymmetry
- (n) National Science Foundation
- (o) American Chemical Society Petroleum Research Fund
- (p) Langmuir
- (q) Macromolecular rapid communications
- (r) Chemical communications
- (s) Research Foundation
- (t) Editorial board of Research Letters in Organic Chemistry

List of Publications

Patents

1. Compositions, methods of use, and methods of treatment for Pain and CNS disorders. Amin, Jahanshah; Bisht, Kirpal S.; Gali, Meghanath. US Patents (2015), 9,073,819.
2. Formation of cyclopentene nitro-ester and derivatives. Bisht, Kirpal S.; Khan, Pasha M.; Van Olphen, Alberto; Wu, Ruizhi. U.S. Patents (2012), US 8236853 B1.
3. Antiviral activity of Cyclopentene Nitro-ester and derivatives. Bisht, Kirpal S.; Van Olphen, Alberto; Khan, Pasha M.; Cynthia Bucher. U.S. Patents (2012), 8,318,804 B2.
4. Jak2 kinase inhibitor compounds . Sayeski, Peter P.; Keseru, Gyorgy M.; Bisht, Kirpal. PCT Int. Appl. (2010), WO 2010068710.
5. Synthesis of farnesylamine derivatives and their pharmaceutical use Kothapalli, Ravi; Bisht, Kirpal S. PCT Int. Appl. (2008), WO 2008143947.
6. Preparation of glycoside cyclic ester ring-opened oligomers as surfactants. Gross, Richard A.; Bisht, Kirpal; Kaplan, David; Swift, Graham; Deng, Fang U.S. (1999), US 5981743.

Research Papers and Reviews:

1. Multifold Ring Closing Metathesis Reactions in the Formation of Resorcin[4]arene Cavitannds. Sumedh Parulekar, Kirankirti Muppalla, Ali Husain, and Kirpal S. Bisht. *RSC Advances*, 2015, **5**, 25477 - 25484.
2. The Jak2 Small Molecule Inhibitor, G6, Reduces the Tumorigenic Potential of T98G Glioblastoma Cells In Vitro and In Vivo. Rebekah Baskin; Sung O. Park; György M. Keserű; Kirpal S. Bisht; Heather L. Wamsley; Peter P. Sayeski. *PLoS One*. (2014) 9(8), e105568, 12 pp.
3. Influence of Resorcin[4]arenes Core Structure on the Spatial Directionality of Multi-arm Poly(ϵ -caprolactone)s. Ruizhi Wu, Talal F. Al-Azemi and Kirpal S. Bisht. *RSC Advances*. (2014). 4 (32), 16864-16870.
4. Protein Kinase C delta (PKC δ) splice variants modulate apoptosis pathway in 3T3L1 cells during adipogenesis: Identification of PKC δ II inhibitor. Rekha Patel, André Apostolatos, Gay Carter, Joanne Ajmo, Meghanath Gali, Denise R. Cooper, Min You, Kirpal S. Bisht and Niketa A. Patel. *Journal of Biological Chemistry*, (2013) 288: 26834-26846.
5. The Small Molecule Inhibitor, G6, Significantly Reduces Bone Marrow Fibrosis and the Mutant Burden in a Mouse Model of Jak2-mediated Myelofibrosis. Annet Kirabo, Sung O. Park, Heather L. Wamsley, Meghanath Gali, Mary K. Reinhard, Zhizhuang Joe Zhao, Kirpal S. Bisht, György M. Keserű, Christopher R. Cogle, and Peter P. Sayeski. *American Journal of Pathology* (2012) 181(3), 858-65.
6. Identification of novel SAR properties of the Jak2 small molecule inhibitor G6:significance of the *para*-hydroxyl orientation. Rebekah Baskin, Meghanath Gali, Sung O. Park, Zhizhuang Joe Zhao, György M. Keserű, Kirpal S. Bisht, and Peter P. Sayeski. *Bioorganic and Medicinal Chemistry Letters*, (2012), 22, 1402-1407.
7. A46, a Benzothiophene Derived Compound, Suppresses Jak2-Mediated Pathologic Cell Growth. Anurima Majumder, Andrew Magis, Sung O. Park, Nicholas C. Figueroa, Rebekah Baskin, Annet Kirabo, Robert W. Allan, Zhizhuang Joe Zhao, Kirpal S. Bisht, György M. Keserű, and Peter P. Sayeski. *Experimental Hematology*, (2012) 40(1), 22-34.
8. The Jak2 Inhibitor, G6, Alleviates Jak2-V617F Mediated Myeloproliferative Neoplasia by Providing Significant Therapeutic Efficacy to the Bone Marrow. Annet Kirabo, Sung O. Park, Anurima Majumder, Meghanath Gali, Mary K. Reinhard, Heather L. Wamsley, Zhizhuang Joe Zhao, Christopher R. Cogle, Kirpal S. Bisht, György M. Keserű, Peter P. Sayeski. *Neoplasia*, (2011), 13(11), 1058-1068.

9. The Stilbenoid Tyrosine Kinase Inhibitor, G6, Suppresses Jak2-V617F Mediated Human Pathological Cell Growth *in vitro* and *in vivo*. Annet Kirabo, Jennifer Embury, Róbert Kiss, Tímea Polgár, Meghanath Gali, Anurima Majumder, Kirpal S. Bisht, Christopher R. Cogle, György M. Keserű, and Peter P. Sayeski. *Journal of Biological Chemistry*, (2011); 286(6), 4280-4291.
10. Synthesis of Functional Polycarbonates from Renewable Resources. Kirpal S. Bisht and Talal F. Al-Azemi. *ACS Symposium Series- Green Polymer Chemistry: Biocatalysis and Biomaterials* (2010) 175-199.
11. Structure-Function Correlation of G6, a Novel Small Molecule Inhibitor of Jak2: Indispensability of the Stilbenoid Core. Anurima Majumder, Lakshmanan Govindasamy, Andrew Magis, Róbert Kiss, Tímea Polgár, Rebekah Baskin, Robert W. Allan, Mavis Agbandje-McKenna, Gary W. Reuther, György M. Keserű, Kirpal S. Bisht, and Peter P. Sayeski. *Journal of Biological Chemistry*, (2010), 285(41), 31399-31407.
12. Unusual regioselectivity in Pd(0)-catalyzed coupling of allylic monoacetates and nitroalkanes: one-pot isomerization–alkylation. Pasha M. Khan, Kirpal S. Bisht. *Tetrahedron Letters*. (2010), 51, 1407-1410.
13. Identification of a Novel Inhibitor of JAK2 Tyrosine Kinase by Structure-Based Virtual Screening. Róbert Kiss, Tímea Polgár, Jacqueline Sayyah, Nicholas C. Figueroa, Alan F. List, Lubomir Sokol, Kenneth S. Zuckerman, Meghanath Gali, Kirpal S. Bisht, Peter P. Sayeski, and György M. Keserű. *Bioorganic and Medicinal Chemistry Letters*, (2009), 19, 3598-3601.
14. One-shot Block Copolymerization of a Functional Seven-Membered Cyclic Carbonate Derived from L-Tartaric Acid with ϵ -Caprolactone. Ruzhi Wu, Talal F. Al Azemi and Kirpal S. Bisht. *Macromolecules*, (2009), 42 (7), 2401–2410.
15. Iron(III) Complexes of Metal-Binding Copolymers as Proficient Catalysts for Acid Hydrolysis of Phosphodiester and Oxidative DNA Cleavage – Insight into the Rational Design of Functional Metallopolymers. Vasiliki Lykourinou, Ahmed I. Hanafy, Kirpal S. Bisht, Alexander Angerhofer, and Li-June Ming. *European Journal of Inorganic Chemistry*, (2009), 1199-1207.
16. Spatially Directional Multiarm Poly(ϵ -Caprolactone) Based on Resorcin[4]arene Cavitand Core. Ruizhi Wu, Talal F. Al-Azemi and Kirpal S. Bisht. *Chemical Communications*, (2009), 1822-1824. Cited as a hot article www.rsc.org/chemcomm/hot published on Jan 13, 2009. The article is featured on the front cover of April 14, 2009 issue of the journal.
17. Functionalized Polycarbonate Derived from Tartaric Acid: Enzymatic Ring-Opening Polymerization of a Seven-Membered Cyclic Carbonate. Ruizhi Wu, Talal F. Al-Azemi, Kirpal S. Bisht. *Biomacromolecules* (2008), 9(10); 2921-2928.
18. How Well Should the Active Site and the Specific Recognition Be Defined for Proficient Catalyses? — *Effective and Cooperative Polyphenol/Catechol Oxidation and Oxidative DNA Cleavage by a Copper(II)-Binding and H-bonding Copolymer*. Vasiliki Lykourinou, Ahmed I. Hanafy, Giordano F. Z. da Silva, Kirpal S. Bisht, Randy W. Larsen, Brian T. Livingston, Alexander Angerhofer, and Li-June Ming. *European Journal of Inorganic Chemistry*, (2008), 2584–2592.
19. Synthesis of Resorcin[4]arene Cavitands by Ring Closing Metathesis. Sumedh N Parulekar, Kirankirti Muppalla, Frank R Fronczek and Kirpal S Bisht. *Chemical Communications*, (2007) 4901 - 4903.
20. Novel synthesis and polymerization of protected dihydroxy 7-member cyclic carbonate. Ruizhi Wu and Kirpal S Bisht. *Polymer Preprints (American Chemical Society, Division of Polymer Chemistry)* (2007), 48(1), 240-241.
21. Pd(0) catalyzed intramolecular alkylation: Stereoselective synthesis of furan and isoxazoline-2-oxide analogs. Pasha Khan, Ruizhi Wu, and Kirpal Bisht, *Tetrahedron*, 63, 1116-1126 (2007).
22. Synthesis of glycolipid analogs via highly regioselective macrolactonization catalyzed by lipase. Kirpal S. Bisht, Surbhi Bhatt, and Kirankirti Muppalla *Tetrahedron Letters*, 47, 8645-8649 (2006).
23. Enantioenriched substituted polycaprolactones by enzyme catalysis- in *Polymer Biocatalysis and Biomaterials*. Kirpal S. Bisht; Leelakrishna Kondaveti; Jon Stewart. ACS symposium series 900, (2005) pp366-392.
24. Effective heterogeneous hydrolysis of phosphodiester by pyridine-containing metallopolymers. Ahmed I. Hanafy, Vasiliki Lykourinou-Tibbs, Kirpal S. Bisht, and Li-June Ming. *Inorganica Chimica Acta*, 358(4), 1247-1252 (2005).
25. Synthesis of polyhydroxy cavitands and intramolecular inclusion of their octaester derivatives. Eric Efrain Dueno and Kirpal S. Bisht. *Tetrahedron*, 60 (48), 10859-10868 (2004).
26. A chemo-enzymatic synthesis of Imperanene via Enzymatic Asymmetrization of an Intermediary 1,3-diol. Jason Carr and Kirpal S. Bisht. *Organic Letters*. 6, 3297-3300 (2004).

27. Intramolecular inclusion in novel octaester cavitands. Eric Dueno and Kirpal S. Bisht. *Chemical Communications*, 954 – 955 (2004).
28. Lipase-catalyzed resolution of *racemic* substituted β -Aryl- β -Lactams. Jason A. Carr, Talal F Al-Azemi, Timothy E. Long, Jeung-Yeop Shim, Cristina A. Coates, Edward E. Turos, and Kirpal S. Bisht. *Tetrahedron*. 59, 9147-9160 (2003).
29. Lipase catalyzed Regioselective transesterification in peracylated sophorolipids catalyzed by *Candida antarctica* lipase-B. Jason A. Carr and Kirpal S. Bisht. *Tetrahedron*. 59, 7713-7724 (2003).
30. A MALDI, TGA, TG/MS, and DEA study of the irradiation effects on PMMA. S. R. Tatro, G. R. Baker, Kirpal S. Bisht and J. P. Harmon. *Polymer*, 44, 167-176 (2003).
31. Solventless enantioselective ring-opening polymerization of substituted ϵ -caprolactones by enzymatic catalysis. Talal F. Al Azemi, Leelakrishna Kondaveti, and Kirpal S. Bisht. *Macromolecules*. 35, 3380-86 (2002).
32. One-step synthesis of polycarbonates bearing pendant functional groups by ring-opening polymerization. Talal F. Al Azemi and Kirpal S. Bisht. *Journal of Polymer Science-A: Polymer Chemistry*. 40, 1267-1274 (2002).
33. Lipase-catalyzed solvent-free kinetic resolution of substituted *racemic* ϵ -caprolactones. Leelakrishna Kondaveti, Talal F. Al Azemi, and Kirpal S. Bisht *Tetrahedron Asymmetry*. 13, 129-35 (2002).
34. Functional polycarbonates synthesis: Enzymatic approach. Talal F. Al-Azemi, and Kirpal S. Bisht. In *Biocatalysis in Polymer Science*, ACS, Washington, DC, Ch. 14, pp 156-171 (2002).
35. Synthesis of novel bis- and tris-(cyclic carbonate)s and their use in preparation of polymer networks. Talal F. Al Azemi and Kirpal S. Bisht. *POLYMER*. 43, 2161-67 (2002).
36. Novel poly(carbonate) and poly(carbonate-ester) networks. Talal F. Al Azemi and Kirpal S. Bisht. *Polymer Prep*. 43(1), 613-614 (2002).
37. Chiral polyesters by in-vitro enzymatic catalysis. Talal F. Al Azemi and Kirpal S. Bisht. *Polymer Prep*. 43(1), 704-705 (2002).
38. The synthesis and polymerization of glycolipid-based monomers. Kirpal S. Bisht and Richard A. Gross. In ACS Symposium Series # 786 *Biopolymers from Polysaccharides and agroproteins*. American Chemical Society, Washington, DC. Ch. 14, pp 222-239 (2001).
39. Synthesis of novel polycarbonates containing pendant carboxyl groups by enzyme catalysis. Talal F. Al-Azemi, Kirpal S. Bisht. *Polymeric Materials: Science and Engineering*, 84, 1045-46 (2001).
40. Enzyme-Catalyzed Ring-Opening Copolymerization of 5-Methyl-5-benzyloxycarbonyl-1,3-dioxan-2-one (MBC) with Trimethylene carbonate (TMC): Synthesis and Characterization. Talal F Al-Azemi, Julie P. Harmon and Kirpal S. Bisht. *Biomacromolecules*, 1, 493-500 (2000).
41. Glycolipids from *Candida bombicola*: Polymerization of a 6-O-acryloyl sophorolipid derivative. Kirpal S. Bisht, Wei Gao and Richard A. Gross. *Macromolecules*, 33, 6208-6210 (2000).
42. Functional polycarbonate synthesis: Enzymatic approach. Kirpal S. Bisht and Talal F. Al Azemi. *Proc. Am. Chem. Soc.: Polymer Preprints*, 41, 1865-66 (2000).
43. Novel Functional Polycarbonate by Lipase-Catalyzed Ring-Opening Polymerization of 5-Methyl-5-benzyloxycarbonyl-1, 3-dioxan-2-one. Talal F. Al Azemi and Kirpal S. Bisht. *Macromolecules*, 32, 6536-6540 (1999).
44. Chemoenzymatic Synthesis of a Multiarm Poly(lactide-co- ϵ -caprolactone). Fang Deng, Kirpal S. Bisht, Richard A. Gross, and David L. Kaplan. *Macromolecules*, 32, 5159-5161 (1999).
45. Constituents of the yew trees. Virinder S. Parmar, Amitabh Jha, Kirpal S. Bisht, Poonam Taneja, Sanjay K. Singh, Ajay Kumar, Poonam, Rajni Jain, and Carl E. Olsen. *Phytochemistry*, 50 (8), 1267-1304 (1999).
46. Enzyme-mediated regioselective acylations of sophorolipids. Kirpal S. Bisht, Richard A. Gross, and David L. Kaplan. *Journal of Organic Chemistry*, 64, 780-789 (1999).
47. Enzymatic polymerization of poly (ϵ -CL) containing an ethyl glucopyranoside head group: an NMR study. Kirpal S. Bisht, Richard A. Gross, and Ashok L. Cholli. *Applied Spectroscopy*, 52, 1472-1478 (1998).
48. Ethyl glucoside as a multifunctional initiator for enzyme-catalyzed regioselective lactone ring-opening polymerization. Kirpal S. Bisht, Fang Deng, Richard A. Gross, David L. Kaplan, and Graham Swift. *Journal of the American Chemical Society*, 120, 1363-1367 (1998).
49. Monomer and Polymer Synthesis by Lipase-catalyzed Ring-Opening Reactions. Kirpal S. Bisht, Lori A. Henderson, Yuri Y. Sivirkin, Richard A. Gross, David L. Kaplan and Graham Swift. In ACS Symposium

- Series 684 *Enzymes in Polymer Synthesis*. Eds RA Gross, DL Kaplan and G Swift. American Chemical Society, Washington, DC. 90-111 (1998).
50. Novel enzymatic de-esterification studies on substituted polyacetoxymethylbenzamide. VS Parmar, A Kumar, AK Prasad, R Kumar, KS Bisht, Poonam, SC Jain, and CE Olsen. *Journal of the Indian Chemical Society* 75, 810-822, (1998).
 51. Synthesis and anti-invasive activity of novel 1,3 –diarylpropenones. Parmar VS, Jain SC, Bisht KS, Sharma NK, Himanshu, Gupta S. *Indian Journal of Chemistry Section B*, 37, 628-643 (1998).
 52. Lipase-catalysed selective deacetylation of phenolic/enolic acetoxy groups in peracetylated benzyl phenyl ketones. Parmar VS, Pati HN, Azim A, Kumar R, Himanshu, Bisht KS, Prasad AK, Errington W. *Bioorganic & Medicinal Chemistry*, 6, 109-118 (1998).
 53. Chemical Constituent of *Taxus canadensis*. Carl E. Olsen, R Singh, Suman Gupta, Kirpal S. Bisht, Sanjay Malhotra, Rajni Jain, Subhash C. Jain, and Virender S. Parmar. *Indian Journal of Chemistry, Sec. B*, 37, 828-831 (1998).
 54. Utility of a novel lipase from *Aspergillus terreus* in deacetylation reactions. Virender S. Parmar, Hari N. Pati, Raman P. Yadav, Ajay Kumar, Kirpal S. Bisht, R Gupta, S Davidson, Poonam, R. K. Sexena. *Biocatalysis Biotransformations*, 16, 17-25 (1998).
 55. Glycolipid containing polyacrylate and polyacrylamide copolymers. Kirpal S. Bisht, Arthur C. Waterson, and Richard A. Gross. *Proc. Am. Chem. Soc.: PMSE*, 78, 246-247 (1998).
 56. Chemoenzymatic synthesis of a multiarm poly(lactide-co- ϵ -caprolactone). Fang Deng, Kirpal S. Bisht, Richard A. Gross, David L. Kaplan, and Graham Swift. *Proc. Am. Chem. Soc.: Polymer Preprints*, 39, 78-79 (1998).
 57. Bioactivity of extracellular glycolipids - investigation of potential anti-cancer activity of sophorolipids and sophorolipid-derivatives Scholz, C.; Mehta, S.; Bisht K.; Guilmanov, V.; Kaplan, D.; Nicolosi, R. and Gross, R. *Proc. Am. Chem. Soc.: Polymer Preprints*, 39, 168-169 (1998).
 58. Lipase-catalyzed ring-opening polymerization of Trimethylene carbonate. Kirpal S. Bisht, Yuri Y. Sivirkin, Lori A. Henderson, Richard A. Gross, David L. Kaplan and Graham Swift. *Macromolecules*, 30, 7735-7742 (1997).
 59. Enzyme-catalyzed Ring-Opening polymerization of ω -Pentadecalactone. Kirpal S. Bisht, Lori A. Henderson, Richard A. Gross, David L. Kaplan, and Graham Swift. *Macromolecules*, 30, 2705-2711 (1997).
 60. Novel chemoselective deesterification of esters of polyacetoxymethyl aromatic acids by lipases. VS Parmar, A Kumar, KS Bisht, S Mukherjee, AK Prasad, SK Sharma, J. Wengel and CE Olsen. *Tetrahedron*, 53, 2163-2176 (1997).
 61. Phytochemistry of the genus *Piper*. Parmar VS, Jain SC, Bisht KS, Jain R, Taneja P, Jha A, Tyagi OD, Prasad AK, Wengel J, Olsen CE, Boll PM. *Phytochemistry*, 46, 597-673 (1997).
 62. Anti-invasive activity of alkaloids and polyphenolics in vitro. Parmar VS, Bracke ME, Philippe J, Wengel J, Jain SC, Olsen CE, Bisht KS, Sharma NK, Courtens A, Sharma SK, Vennekens K, VanMarck V, Singh SK, Kumar N, Kumar A, Malhotra S, Kumar R, Rajwanshi VK, Jain R, Mareel MM. *Bioorganic & Medicinal Chemistry*, 5, 1609-1619 (1997).
 63. Lipase-catalyzed ring-opening polymerization of cyclic carbonates. Kirpal S. Bisht, Yuri Y. Sivirkin, Richard A. Gross, David L. Kaplan and Graham Swift. *Proc. Am. Chem. Soc.: PMSE*, 76, 421-422 (1997).
 64. Chiral discrimination by hydrolytic enzymes in synthesis of optically pure materials. VS Parmar, KS Bisht, A Singh and A Jha. *Proceedings of the Indian Academy of Sciences, Chemical Sciences*, 108, 576-583 (1996).
 65. Hydrolytic reactions on polyphenolic perpropionates by porcine pancreatic lipase immobilized in microemulsion-based gels. Parmar VS, Pati HN, Sharma SK, Singh A, Malhotra S, Kumar A, Bisht KS. *Bioorganic & Medicinal Chemistry Letters*, 6, 2269-2274 (1996).
 66. Chemoprevention of carcinogen-DNA binding: The relative role of different oxygenated substituents on 4-methylcoumarins in the inhibition of aflatoxin B-1-DNA binding in vitro. Raj HG, Gupta S, Biswas G, Singh S, Singh A, Jha A, Bisht KS, Sharma SK, Jain SC, Parmar VS. *Bioorganic & Medicinal Chemistry* 4, 2225-2228 (1996).
 67. Novel biotransformations on peracylated polyphenolics by lipases immobilized in microemulsion-based gels and on carbohydrates by *Candida antarctica* lipase. VS Parmar, KS Bisht, HN Pati, NK Sharma, A Kumar, S Malhotra, A Singh, AK Prasad and J Wengel. *Pure and Applied Chemistry*, 68, 1309-1314 (1996).

68. Synthesis and X-ray structure of 2-(3-methyl-2-butenyl)-3,4,5-trimethoxyphenol: apotent anti-invasive agent against solid tumours. VS Parmar, S Gupta, KS Bisht, S Mukherjee, PM Boll and W Errington. *Acta Chemica Scandinavica*, 50, 558-560 (1996)
69. 3,5-Dichloro-2,6-dimethoxycyclohexa-2,5-diene-1,4-dione. S Mukherjee, KS Bisht, VS Parmar and W Errington. *Acta Crystallographica*, 52C, 1211-1213 (1996).
70. Synthesis, antimicrobial and antiviral activities of novel polyphenolic compounds. VS Parmar, KS Bisht, R Jain, S Singh, SK Sharma, S Gupta, OD Tyagi, A Vardhan, HN Pati, DV Berghe and AJ Vlietinck. *Indian Journal of Chemistry*, 35B, 220-232 (1996).
71. Neolignans, cyclohexanes and alkaloids from *Piper wightii*. PM Boll, AK Prasad, OD Tyagi, J Wengel, CE Olsen, N Kumar, KS Bisht and VS Parmar. *Recueil des Travaux Chimiques des Pays-Bas (Journal of the Royal Netherlands Chemical Society)*, 115, 9-12 (1996).
72. Schiff bases of amino acids as new substrates for the enantioselective enzymatic hydrolysis and accompanied asymmetric transformations in aqueous organic solvents. VS Parmar, A Singh, KS Bisht, N Kumar, YN Belokon, KA Kochetkov, NS Ikonnikov, SA Orlova, VI Tararov and TF Saveleva. *Journal of Organic Chemistry*, 61, 1223-1227 (1996).
73. Preparative and mechanistic aspects of interesterification reactions on diols and peracetylated polyphenolic compounds catalyzed by porcine pancreatic lipase. KS Bisht, A Kumar, N Kumar and VS Parmar. *Pure and Applied Chemistry*, 68, 749-752 (1996).
74. Enzymes in organic media as catalysts for polyester synthesis. RA Gross, J Xu, YY Sivirkin, LA Henderson, KS Bisht, DL Kaplan and G Swift. *Proc. Am. Chem. Soc.: PMSE*, 74, 67-68 (1996).
75. 3-[3-(4-Bromophenyl)-1-phenylpyrazol-5-yl]-2H-1-benzopyran-2-one. Sanjay K. Singh, Naresh Kumar, Sanjay Malhotra, Kirpal S. Bisht, Virinder S. Parmar, and William Errington. *Acta Crystallogr., Sect. C: Cryst. Struct. Commun.*, C51 (11), 2406-7 (1995).
76. 5-Cyanomethyl-3-(4-methylphenyl)-1-phenylpyrazole. Sanjay K. Singh, Ajay Kumar, Archana Vats, Kirpal S. Bisht, Virinder S. Parmar, and William Errington. *Acta Crystallogr., Sect. C: Cryst. Struct. Commun.*, C51 (11), pp. 2404-6 (1995).
77. Synthetic and mass spectral studies on new 1,3-diphenylpro-2-eneones of agrochemical interest. VS Parmar, SK Sharma, KS Bisht, A Singh, S Aggarwal, R Jain and A Vardhan. *Russian Journal of Organic Chemistry*, 31, 1839-1848 (1995).
78. Methyleneedioxyphenyl substituted compounds from *Piper* species as inhibitors of liver microsomes-mediated aflatoxin B₁-DNA binding *in vitro*. HG Raj, S Gupta, AK Prasad, PM Boll, J Wengel, G Biswas, SK Singh, NK Sharma, KS Bisht and VS Parmar. *Bioorganic and Medicinal Chemistry Letters*, 5, 1567-1572 (1995).
79. Neolignans and a lignan from *Piper clarkii*. AK Prasad, OD Tyagi, J Wengel, PM Boll, CE Olsen, KS Bisht, A Singh, A Sarangi, R Kumar, SC Jain and VS Parmar. *Phytochemistry*, 38, 655-658 (1995).
80. (Z)-Ethyl 2-cyano-3-methylsulfanyl-3-thiomethylpropenoate. SK Singh, N Kumar, A Kumar, KS Bisht, VS Parmar and W Errington. *Acta Crystallographica*, 51C, 1630-1632 (1995).
81. A benzoic acid ester from *Uvaria narum*. VS Parmar, KS Bisht, A Malhotra, A Jha, W Errington, OW Howarth, OD Tyagi, PC Stein, S Jensen, PM Boll and CE Olsen. *Phytochemistry*, 38, 951-955 (1995).
82. Neolignan from *Piper schmidtii* and reassignment of the structure of schmidtin. OD Tyagi, AK Prasad, J Wengel, PM Boll, CE Olsen, VS Parmar, NK Sharma, A Jha and KS Bisht. *Acta Chemica Scandinavica*, 49, 142-148 (1995).
83. Potentially useful lipase-catalyzed transesterifications. AK Jha, KS Bisht and VS Parmar. *Proceedings of the Indian Academy of Sciences, Chemical Sciences*, 106, 1191-1202 (1994).
84. Isothionate in certain red algae. PB Holst, SE Nielsen, U Anthoni, KS Bisht, C Christophersen, S Gupta, VS Parmar, PH Nielsen, DB Sahoo and A Singh. *Journal of Applied Phycology*, 6, 443-446 (1994).
85. Benzofuranoid neolignans from *Piper wightii* Miq. OD Tyagi, J Wengel, AK Prasad, PM Boll, CE Olsen, HN Pati, KS Bisht and VS Parmar. *Acta Chemica Scandinavica*, 48, 1007-1011 (1994).
86. Biotransformations in the regioselective deacetylation of phenolic peracetates in organic solvents. KS Bisht, OD Tyagi, AK Prasad, NK Sharma, S Gupta and VS Parmar. *Bioorganic and Medicinal Chemistry*, 2, 1015-1020 (1994). *Errata*: 3: (7) 997-997 JUL 1995.
87. Neolignans and an isoprenylated phenol from *Piper clarkii*. S Jensen, CE Olsen, OD Tyagi, PM Boll, FA Hussaini, S Gupta, KS Bisht and VS Parmar. *Phytochemistry*, 36, 789-792 (1994).
88. Novel constituents of *Uvaria* species. VS Parmar, OD Tyagi, A Malhotra, SK Singh, KS Bisht and R Jain. *Natural Product Reports*, 11, 219-224 (1994).

89. Synthesis, biological activity and solvent-induced shifts in the ^1H NMR spectra of 2,3-dihydro-4*H*-benzopyran-4-ones. VS Parmar, A Vardhan, SK Sharma, NK Sharma and KS Bisht. *Indian Journal of Chemistry*, 33B, 17-26 (1994).
90. Lignans and neolignans from stems of *Piper wightii*. AK Prasad, OD Tyagi, J Wengel, PM Boll, CE Olsen, S Gupta, NK Sharma, KS Bisht and VS Parmar. *Tetrahedron*, 50, 10579-10586 (1994).
91. Highly oxygenated bioactive flavones from *Tamarix*. VS Parmar, KS Bisht, SK Sharma, R Jain, P Taneja, S Singh, O Simonsen and PM Boll. *Phytochemistry*, 36, 507-511 (1994).
92. Lignans and neolignans from stems and fruits of *Piper wightii*. AK Prasad, OD Tyagi, J Wengel, PM Boll, CE Olsen, NK Sharma, KS Bisht, S Gupta and VS Parmar. *Tetrahedron*, 50, 2231-2240 (1994); Corrigendum *Tetrahedron*, 50, 6721 (1994).
93. A rare biflavone from *Taxus baccata*. VS Parmar, A Vardhan, KS Bisht, NK Sharma, R Jain, P Taneja, OD Tyagi and PM Boll. *Indian Journal of Chemistry*, 32B, 601-603 (1993).
94. Regioselective enzyme-catalyzed deacetylation of benzyl phenyl ketone peracetates in organic solvents. VS Parmar, AK Prasad, NK Sharma, KS Bisht, HN Pati and P Taneja. *Bioorganic and Medicinal Chemistry Letters*, 3, 585-588 (1993).
95. Diastereo- and enantioselective esterification of butane 2,3-diol catalyzed by the lipase from *Pseudomonas fluorescens*. KS Bisht, VS Parmar and DHG Crout. *Tetrahedron: Asymmetry*, 4, 957-958 (1993).
96. Regioselective esterification of diols and triols with lipases in organic solvents. VS Parmar, R Sinha, KS Bisht, S Gupta, AK Prasad and P Taneja. *Tetrahedron*, 49, 4107-4116 (1993).
97. Lignans and neolignans from *Piper schmidtii*. OD Tyagi, S Jensen, PM Boll, NK Sharma, KS Bisht and VS Parmar. *Phytochemistry*, 32, 445-448 (1993).
98. Lipase-catalysed selective deacylation of peracetylated benzopyranones. VS Parmar, AK Prasad, NK Sharma, A Vardhan, HN Pati and KS Bisht. *Journal of Chemical Society, Chemical Communications*, 27-29 (1993).
99. Regioselective hydrolysis of polyacetoxy aromatic ketones with lipases in organic solvents. VS Parmar, CH Khanduri, OD Tyagi, AK Prasad, S Gupta, KS Bisht, HN Pati and NK Sharma. *Indian Journal of Chemistry*, 31B, 925-929 (1992).
100. Potential applications of enzyme-mediated transesterifications in the synthesis of bioactive compounds. VS Parmar, AK Prasad, NK Sharma, KS Bisht, R Sinha and P Taneja. *Pure and Applied Chemistry*, 64, 1135-1139 (1992).
101. A wax ester from *Piper clarkii*. PM Boll, M Hald, VS Parmar, OD Tyagi, KS Bisht, NK Sharma and S Hansen. *Phytochemistry*, 31, 1035-1037 (1992).

SYMPOSIA/MEETINGS PARTICIPATED IN, AND TITLES OF PAPERS PRESENTED AT THESE MEETINGS.

IUPAC- NOST International Symposium on "Enzymes in Organic Sythesis" held at New Delhi (India) from January 6-9, 1992.

- 1) Lipase-catalyzed irreversible transesterification using 2,2,2-trifluoroethyl butyrate: effect of temperature on rate of reaction and enantioselectivity.
- 2) Enzyme-catalyzed regioselective deacylation of polyphenolic peracetates in organic solvents.
- 3) Enzymatic studies in selective protection of sterically hindered hydroxyl groups in polyphenolics.
- 4) Lipase-catalyzed selective deacetylation of peracetylated bezopyranones.
- 5) Regioselective esterification with lipases in organic solvents.

IUPAC Second International Syposium on "Bioorganic Chemistry" held at Fukuoka (Japan) on June 6-10, 1993.

Selective biotransformations on diols with lipases.

Fourth International Symposium on "Chiral Discrimination" held at Montreal (Canada) on September 19-22, 1993.

Enantioselective transesterification of 2,3-butanediol.

International Symposium on “Perspectives in Bioorganic Chemistry” held at New Delhi (India) on December 8-9, 1994.

- 1) Novel compounds from *Piper clarkii* and their biological activity.
- 2) A novel lipase from *Aspergillus terreus*: its potential in organic synthesis.
- 3) Lignans and neolignans from stems and fruits of *Piper wightii*.
- 4) Enzyme-catalyzed deacetylation of peracetates of phenolic/enolic hydroxy groups in benzyl- phenyl ketones.
- 5) Isethionate in certain red algae.

IUPAC 10th International Conference on “Organic Synthesis” held at Bangalore (India) on December 11-16, 1994.

Asymmetric transformation of racemic amino acids during enzyme-catalyzed hydrolysis of Schiff bases of amino acids esters.

IUPAC 3rd International Symposium on “Bioorganic Chemistry” held at Dagomys (Sochi, Russia) on September 17-23, 1995.

Modulation of biotransformation of aflatoxin by novel compounds from *Piper* species.

5th Annual Meeting of the Bio/Environmentally Degradable Polymer Society at Nashville (Tennessee, USA) on September 22-26, 1996.

Enzyme-catalyzed synthesis of polymers for biodegradable applications

6th Annual Meeting of the Bio/Environmentally Degradable Polymer Society at San Diego (California, USA) on September 17-20, 1997.

- 1) Lipase-catalyzed route to versatile amphiphilic polymers.
- 2) Lipase -catalyzed ring-opening poly,merizations
- 3) Propagation kinetics on enzyme catalyzed ring-opening polymerization of lactones

16th Annual Florida Organic Chemistry faculty Conference at USF on February 27, 1999.

- 1) New Strategies for using Enzyme –catalyzed Ring-opening polymerizations

International Symposium on “Trends in Medicinal Chemistry and Biocatalysis” at New Delhi, India on January 26-29, 2000.

- Biocatalytic Routes to Functional Polymers

220th National Meeting of the American Chemical Society at Washington, DC on August 20-24, 2000.

- Functional Polycarbonate Synthesis: Enzymatic Approach

Florida Annual Meeting and Exposition 2001 (FAME) of the Florida Section of the American Chemical Society at Orlando, FL on May 11-12, 2001.

- Enzymes as Novel Catalyst for Functional Polymers.

221th National Meeting of the American Chemical Society at San Diego, CA on April 1-5, 2001.

- Synthesis of novel polycarbonates containing pendant carboxyl groups by enzyme catalysis.

223rd National Meeting of the American Chemical Society at Orlando, FL on April 7-11, 2002.

- Novel poly(carbonate) and poly(carbonate-ester) networks.
- Chiral polyesters by *in-vitro* enzymatic catalysis.
- Lipase-catalyzed resolution of racemic α -aryl- β -lactams.

226th National Meeting of the American Chemical Society at New York, NY on September 7-11, 2003.

- Chemoenzymatic Synthesis of enantioenriched substituted polycaprolactones.

IUPAC international Conference on Biodiversity and Natural Products: Chemistry and Medicinal Applications (ICOB- β and ISCNO-24) at New Delhi, India on January 26-31, 2004.

- Enzymatic Catalysis in Synthesis of Chiral and Functional Macromolecules.

Sukant Tripathy memorial Symposium 2006 Lowell Massachusetts Dec 1, 2006

- Biocatalysis: Exploiting Selectivity of lipases

PRESENTATIONS MADE AT THE AMERICAN CHEMICAL SOCIETY MEETINGS-

- Gross, R. A.; Xu, J.; Svirkin, Y. Y.; Henderson, L. A.; Bisht, K. S.; Kaplan, D. L.; Swift, G. Enzymes in organic media as catalysts for polyester synthesis. Book of Abstracts, 211th ACS National Meeting, New Orleans, LA, March 24-28 (1996), PMSE-038.
- Bisht, Kirpal S.; Svirkin, Yuri Y.; Gross, Richard A.; Kaplan, David L.; Swift, Graham. Lipase-catalyzed ring-opening polymerization of cyclic carbonates. Book of Abstracts, 213th ACS National Meeting, San Francisco, April 13-17 (1997), PMSE-257.
- Bisht, Kirpal S.; Watterson, Arthur C.; Gross, Richard A. Glycolipid containing polyacrylate and polyacrylamide copolymers. Book of Abstracts, 216th ACS National Meeting, Boston, August 23-27 (1998), PMSE-112.
- Scholz, C.; Mehta, S.; Nicolosi, R.; Bisht, K.; Guilmanov, V.; Gross, R. Bioactivity of extracellular glycolipids - investigation of potential anti-cancer activity of sophorolipids and sophorolipid-derivatives. Book of Abstracts, 216th ACS National Meeting, Boston, August 23-27 (1998), POLY-010.
- Deng, Fang; Bisht, Kirpal S.; Gross, Richard A.; Kaplan, David L.; Swift, Graham. Chemoenzymic synthesis of a multiarm poly(lactide-co-caprolactone). Book of Abstracts, 216th ACS National Meeting, Boston, August 23-27 (1998), POLY-006.
- Bisht, Kirpal S.; Al-Azemi, Talal F. Functional polycarbonate synthesis: Enzymatic approach. Abstracts of Papers, 220th ACS National Meeting, Washington, DC, United States, August 20-24, 2000 (2000), POLY-426.
- Al-Azemi, Talal F.; Bisht, Kirpal S.. Novel poly(carbonate) and poly(carbonate-ester) networks. Abstracts of Papers, 223rd ACS National Meeting, Orlando, FL, United States, April 7-11, 2002 (2002), POLY-176.
- Bisht, Kirpal S.; Al-Azemi, Talal F.; Kondaveti, Leelakrishna. Chiral polyesters by in-vitro enzymatic catalysis. Abstracts of Papers, 223rd ACS National Meeting, Orlando, FL, United States, April 7-11, 2002 (2002), POLY-230.
- Carr, Jason A.; Bisht, Kirpal S.; Turos, Edward. Lipase-Catalyzed Resolution of racemic beta-Aryl beta-Lactams. Abstracts of Papers, 223rd ACS National Meeting, Orlando, FL, United States, April 7-11, 2002 (2002), ORGN-051.
- Bisht, Kirpal S.; Al-Azemi, Talal F.; Kondaveti, Leelakrishna. Chemoenzymatic synthesis of enantioenriched substituted polycaprolactones. Abstracts of Papers, 226th ACS National Meeting, New York, NY, United States, September 7-11, 2003 (2003), POLY-440.
- Dueno, Eric Efrain; Chapalamadugu, Sandeep A.; Bisht, Kirpal S.. Design and synthesis of polyhydroxy cavitands. Abstracts of Papers, 225th ACS National Meeting, New Orleans, LA, United States, March 23-27, 2003 (2003), ORGN-513.
- Bisht, Kirpal S.; Carr, Jason A. Chemoenzymatic enantioselective synthesis of Imperanene. Abstracts of Papers, 227th ACS National Meeting, Anaheim, CA, United States, March 28-April 1, 2004 (2004), ORGN-479.
- Dueno, Eric Efrain; Matson, Elizabeth K.; Bisht, Kirpal S.. Synthesis of resorcinarenes via a Claisen rearrangement product and aldehydes. Abstracts of Papers, 227th ACS National Meeting, Anaheim, CA, United States, March 28-April 1, 2004 (2004), CHED-973.
- Dueno, Eric E.; Tehrani, Shabnam J.; Bisht, Kirpal S.. Synthesis of novel resorcinarenes. Abstracts of Papers, 227th ACS National Meeting, Anaheim, CA, United States, March 28-April 1, 2004 (2004), CHED-972.
- Bhatt, Surbhi; Henchey, Laura K.; Bisht, Kirpal S.. Synthesis of carbohydrate macrolactones. Abstracts of Papers, 227th ACS National Meeting, Anaheim, CA, United States, March 28-April 1, 2004 (2004), CHED-968.
- Wu, Ruizhi; Bisht, Kirpal. Novel synthesis and polymerization of protected dihydroxy 7-member cyclic carbonate. Abstracts of Papers, 233rd ACS National Meeting, Chicago, IL, United States, March 25-29, 2007 (2007), POLY-100.
- Khan, Pasha M.; Wu, Ruizhi; Bisht, Kirpal S.. Pd(0) catalyzed intramolecular alkylation: Stereoselective synthesis of furan and isoxazoline-2-oxide analogs. Abstracts of Papers, 233rd ACS National Meeting, Chicago, IL, United States, March 25-29, 2007 (2007), ORGN-151.

- William Maza, Sumedh N. Parulekar, Kirpal S. Bisht and Randy W. Larsen. Photophysical Properties of Three Calix[4]Resorcinarenes of Amphiphilic Character at the ACS Southeastern Regional Meeting, October 24 – 27, 2007.)