
CURRICULUM VITAE

KAMALJIT KAUR, PH.D.

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Editorial Board Member, *Scientific Reports*

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I. ACADEMIC BACKGROUND

A. EDUCATION AND TRAINING

- 2001-2004: **Post-doctoral fellow**
Department of Chemistry, University of Alberta, Alberta, Canada
Project: Antimicrobial Peptides from Lactic Acid Bacteria (Supervisor: John C. Vederas)
- 1999-2001: **Post-doctoral fellow**
Department of Chemistry, Wesleyan University, Connecticut, USA
Project: Design, Synthesis, and Evaluation of Acyl Phosph(on)ates as β -Lactamase Inhibitors (Supervisor: Rex F. Pratt)
- 1994-1999: **Ph.D.** in Bioorganic Chemistry
Department of Chemistry, Case Western Reserve University, Cleveland, Ohio, USA
Dissertation: Modification of Proteins by Oxidized Lipids in LDL and Human Plasma: Immunodetection and Prevention (Supervisor: Robert G. Salomon)
- 1995-1998: **Graduate Student Fellow**
Department of Cell Biology, Cleveland Clinic Foundation, Cleveland, Ohio, USA (Supervisor: Henry F. Hoff)
- 1993-1994: **Junior Research Fellow**
Department of Chemistry, Indian Institute of Technology, Kanpur, India (Supervisor: Yeshwant. D. Vankar)
- 1991-1993: **M.Sc.** in Organic Chemistry
Department of Chemistry, Indian Institute of Technology, Kanpur, India
Thesis Title: Synthesis of Some Useful Chiral Intermediates via Enzymatic Resolution (Supervisor: Yeshwant. D. Vankar)
- 1988-1991: **B.Sc. Honors** in Chemistry
Delhi University, New Delhi, India.

B. ACADEMIC APPOINTMENTS

06/2015-present:	Associate Professor (tenured), Chapman University School of Pharmacy (CUSP), Chapman University, Irvine, CA, USA
08/2016-02/2019:	Director, Center for Targeted Drug Delivery (CTDD), Chapman University, Irvine, CA, USA
08/2014-05/2015:	Distinguished Chancellor Fellow (0.2 FTE), Chapman University School of Pharmacy, Chapman University, Irvine, CA, USA
07/2012-05/2016:	Associate Professor (tenured), Faculty of Pharmacy and Pharmaceutical Sciences, University of Alberta, Canada (on leave 06/15-05/16)
04/2004-06/2012:	Assistant Professor, Faculty of Pharmacy and Pharmaceutical Sciences, University of Alberta, Canada
Delays	Maternity leave (05/2004-08/2004, 4 months) Childcare leave (09/2007-05/2008, 9 months)

C. AWARDS AND AFFILIATIONS

2011	Thieme Chemistry Journals Award 2011
2005	New Opportunities Fund Award, Canada Foundation for Innovation
1998	Chemistry Department Fellowship, Depart. of Chemistry, CWRU, USA
1994	Graduate Aptitude Test in Engineering (GATE) Fellowship, India
1991-1993	Government Merit Scholarship for M.Sc., India
Since 1999	Member, American Chemical Society (ACS)
Since 2015	Member, American Association of Colleges of Pharmacy (AACP)
Since 2019	Member, Materials Research Society (MRS)
2014-2016	Member, American Association of Pharmaceutical Scientists (AAPS)
2013-2016	Member, Canadian Federation of University Women (CFUW)
2005-2016	Member, Association of Faculties of Pharmacy of Canada (AFPC)
2000-2016	Member, Canadian Society for Chemistry (CSC)
2004-2015	Member, Canadian Society for Pharmaceutical Sciences (CSPS)

II. RESEARCH AND SCHOLARLY ACTIVITIES**A. RESEARCH INTERESTS**

- *Engineering Peptides and Peptide-mimetics* for Biomedical Applications
- *Targeted Drug Delivery*: Peptide Assisted Drug Delivery to Breast Cancer and Melanoma
- *Biomedical Diagnostics*: Peptide-based Platforms as Diagnostics for Cancer and Bacteria

B. RESEARCH GRANTS**Currently Held:**

Source: NIH-National Cancer Institute (NCI) (2017-2020)

Title: Breast cancer targeting peptides for improved efficacy of current cancer treatment

Role: PI (collaborator: Dr. Shiuan Chen, Beckman Research Institute, City of Hope)

Source: Chapman University School of Pharmacy Start-Up Fund (2015-2019)

Title: Targeted drug delivery and Biomedical diagnostics

Role: PI

Held in the Past:

Source: Alberta Innovates Bio Solutions (2013-2016)

Title: Increasing the activity and yields of bacteriocins for use in the food and animal industries

Role: PI (Co-PI: David Wishart and Lynn McMullen)

Source: Natural Sciences and Engineering Research Council of Canada (NSERC-Discovery) (2011-2016)

Title: Investigation of Peptides and Peptidomimetics for Developing Bioactive Molecules

Role: PI

Source: Canadian Institutes of Health Research (CIHR) Bridge Grant (2014-2015)

Title: Nanodelivery Systems for Modulation of Chemotherapy Response in Invasive and Metastatic Breast Cancer

Role: Co-PI (PI: Afsaneh Lavasanifar)

Source: Natural Sciences and Engineering Research Council of Canada (NSERC-Strategic Projects) (2011-2014)

Title: Detection of Pathogenic Bacteria through Antimicrobial Peptide-based Cantilever Bio-MEMS (MicroElectroMechanical System) Sensor

Role: PI (Co-PI: Thomas Thundat and Sushanta Mitra)

Source: Alberta Cancer Foundation Bridge Operating Grant (ACF-CIHR) (2013-2014)

Title: Tumor targeted polymeric nanocarriers for oncogene silencing therapy of metastatic breast cancer

Role: Co-PI (PI: Afsaneh Lavasanifar)

Source: Alberta Cancer Foundation Bridge Operating Grant (ACF-CIHR) (2013-2014)

Title: Tumor targeted polymeric nanocarriers for oncogene silencing therapy of metastatic breast cancer

Role: Co-PI (PI: Afsaneh Lavasanifar)

Source: Alberta Livestock and Meat Agency (ALMA) (2011-2013)

Title: Novel bactericidal peptides against *Mannheimia hemolytica*-induced feedlot pneumonia in cattle

Role: Co-PI (PI: Baljit Singh)

Source: Alberta Cancer Foundation Bridge Operating Grant (CIHR) (2011-2013)

Title: Ligand guided polymeric nano-carriers for tumor targeted drug and oncogene silencing therapy

Role: Co-PI (PI: Afsaneh Lavasanifar)

Source: JCR Biolab Inc. Irvine, CA, USA (2012)

Title: Development of a substrate-based reagent for the detection and enumeration of *E. coli*

Role: PI

Source: Canada Foundation for Innovation-Infrastructure Operating Fund (CFI-IOF) (2007-2012)

Title: Biomolecular Design and Peptidomimetic Drug Discovery Laboratory

Role: PI

Source: Canada Foundation for Innovation (CFI) and Alberta Advanced Education and Technology (AAET) (2011-2012)

Title: Facility to Support the Bench-to-bedside Development of Targeted Drugs and Drug Delivery Systems for Improved Therapeutic Performance

Role: Co-PI (PI: Afsaneh Lavasanifar)

Source: Natural Sciences and Engineering Research Council of Canada (NSERC-Discovery) (2008-2011)

Title: Peptidomimetic Approaches for Developing Biologically Active Molecules

Role: PI

Source: NSERC-Research Tools and Instruments Grant (NSERC-RTI) (2010-2011)

Title: Differential Scanning calorimetry for the development of new pharmaceuticals

Role: Co-PI (PI: Afsaneh Lavasanifar)

Source: International Science and Technology Partnerships Canada Inc. (ISTP) (2010-2011)

Title: Joint Indo-Canadian Meeting on Development of Low Cost Lab-on-a-Chip Medical Devices for Health Monitoring

Role: Co-PI (PI: Thomas Thundat)

Source: NSERC-Collaborative Health Research Projects (NSERC-CHRP) (2009-2010)

Title: A New Approach for Sensitization of Chemoresistant Cancers to Drug Therapy

Role: Co-PI (PI: Hasan Uludag)

Source: Natural Sciences and Engineering Research Council of Canada (NSERC-Strategic Projects) (2006-2010)

Title: Ligand guided polymeric nano-carriers for targeted vaccine and drug delivery in cancer

Role: Co-PI (PI: John Samuel)

Source: Canada Foundation for Innovation (CFI) (2005-2006)

Title: Biomolecular Design and Peptidomimetic Drug Discovery Laboratory

Role: PI

Source: Department of Medicine Research Funds, University of Alberta (2007-2008)

Title: Pilot Study for Allicin-mediated Decolonization of MRSA in Health Care Settings

Role: Co-PI (PI: Kanna Alagiakrishnan)

Source: Canadian Institutes of Health Research (CIHR) (2006-2010)

Title: Multi-user maintenance, equip-ment, and support for nuclear magnetic resonance (NMR) facility

Role: Co-PI (PI: Edward Knaus)

Source: University of Alberta (2004-2008)

Title: University of Alberta Start-Up Fund

Role: PI

C. RESEARCH COMMUNITY

Editorial Board Member

Scientific Reports by NPG

Grant Review Panel

NIH-NCI, Special Emphasis Panel

CIHR, College of Reviewers member

CIHR, Stage 1 review process of the Project Grant competition

Canadian Breast Cancer Foundation-Prairies/NWT Region, Research Grant Competition

CIHR, Pharmaceutical Sciences Committee

CIHR, Pharmacology and Toxicology Committee

Reviewer for >15 Grant Applications

Regular or Frequent Reviewer for following Journals

Amino Acids; Analytical Chemistry; ACS Applied Materials and Interfaces; Biochimica et Biophysica Acta (BBA)-Biomembranes; BMC Microbiology; BMC Structural Biology Bioconjugate Chemistry; Biomacromolecules; Bioorganic and Medicinal Chemistry; Bioorganic and Medicinal Chemistry Letters; Biopolymers; Canadian Journal of Chemistry; Chemical Biology & Drug Design; Chemical Reviews; ChemMedChem; Critical Reviews in Biotechnology; Drug Delivery and Translational Research; European Journal of Medicinal Chemistry; Environmental Science & Technology; Journal of Biomedicine and Biotechnology; Journal of the American Chemical Society (JACS); Journal of Cancer; Journal of Chemical Information and Modeling; Journal of Combinatorial Chemistry; Journal of Medicinal Chemistry; Journal of Pharmacy & Pharmaceutical Sciences; Journal of Polymer Science, Part A: Polymer Chemistry; Langmuir; Molecular Pharmaceutics; Organic Letters

D. RESEARCH CONTRIBUTIONS AND PRACTICAL APPLICATIONS

REFEREED JOURNAL PUBLICATIONS

Published (trainee names under my supervision are underlined, *corresponding author)

h index = 27 (total citations 2029)

1. R. Soudy, R. Kimura, A. Patel, W. Fu, **K. Kaur**, D. Westaway, J. Yang, J. Jhamandas*, Short amylin receptor antagonist peptides improve memory deficits in Alzheimer's disease mouse model, *Sci. Rep. (Nature Publishing Group)*, **2019**, 9, 10942:1-11. (July 29, 2019).

2. H. Hossein-Nejad-Ariani, E. Althagafi, **K. Kaur***, Small peptide ligands for targeting EGFR in triple negative breast cancer cells, *Sci. Rep. (Nature Publishing Group)*, **2019**, *9*, 2723:1-10. (Feb 25, 2019).
3. S.B. Patil, R.M. Al-Jehani, H. Etayash, V. Turbe, K. Jiang, J. Bailey, W. Al-Akkad, R. Soudy, **K. Kaur**, R.A. McKendry, T. Thundat, J.W. Ndieyira*, Modified cantilever arrays improve sensitivity and reproducibility of nanomechanical sensing in living cells, *Commun. Biol. (Nature Publishing Group)* **2018**, *1*, 175.
4. H. Soleymani Abyaneh, A.H. Soleimani, M.R. Vakili, R. Soudy, **K. Kaur**, F. Cuda, A. Tavassoli, A. Lavasanifar*, Modulation of Hypoxia-Induced Chemoresistance to Polymeric Micellar Cisplatin: The Effect of Ligand Modification of Micellar Carrier Versus Inhibition of the Mediators of Drug Resistance, *Pharmaceutics*, **2018**, *10*, 196.
5. W. Mohammed-Saeid, R. Soudy, R. Tikoo, **K. Kaur**, R. Verrall, I. Badea*, Design and evaluation of gemini surfactant-based lipoplexes modified with cell-binding peptide for targeted gene therapy in melanoma model, *J. Pharm. Pharm. Sci.*, **2018**, *21*, 363-375.
6. H. Hossein-Nejad-Ariani, T. Kim, **K. Kaur***, Peptide-based Biosensor Utilizing Fluorescent Gold Nanoclusters for Detection of *Listeria monocytogenes*, *ACS Appl. Nano Mater.*, **2018**, *1*, 3389-3397. (June 1, 2018)
7. W. Fu, V. Vukojevic, A. Patel, R. Soudy, D. MacTavish, D. Westaway, **K. Kaur**, V. Goncharuk, J. Jhamandas*, Role of microglial amylin receptors in mediating beta amyloid (A β)-induced inflammation, *J. Neuroinflammation*, **2017**, *14*, 199 (1-12). (Oct 6, 2017)
8. D.R. Balay, R.V. Dangeti, **K. Kaur**, L.M. McMullen*, Purification of leucocin A for use on wieners to inhibit *Listeria monocytogenes* in the presence of spoilage organisms, *Int. J. Food Microbiol.*, **2017**, *255*, 25-31. (Aug 16, 2017)
9. S.M. Garg, I.M. Paiva, M.R. Vakili, R. Soudy, K. Agopsowicz, A.H. Soleimani, M. Hitt, **K. Kaur**, A. Lavasanifar*, Traceable PEO-poly(ester) micelles for breast cancer targeting: The effect of core structure and targeting peptide on micellar tumor accumulation, *Biomaterials* **2017**, *144*, 17-29. (Aug 4, 2017)
10. Y. Raghuwanshi, H. Etayash, R. Soudy, I. Paiva, A. Lavasanifar, **K. Kaur***, Proteolytically stable cyclic decapeptide for breast cancer cell targeting, *J. Med. Chem.* **2017**, *60*, 4893-4903. (Jun 22, 2017)
11. R. Soudy, H. Etayash, K. Bahadorani, A. Lavasanifar, **K. Kaur***, Breast Cancer Targeting Peptide Binds Keratin 1: A New Molecular Marker for Targeted Drug Delivery to Breast Cancer, *Mol. Pharm.*, **2017**, *14*, 593-604. (Mar 6, 2017)
12. R. Soudy, N. Byeon, Y. Raghuwanshi, S. Ahmed, A. Lavasanifar, **K. Kaur***, Engineered Peptides for Applications in Cancer Targeted Drug Delivery and Tumor Detection, *Mini Rev. Med. Chem.*, **2017**, *17*, 1696-1712. (Feb 19, 2016)
13. P.M. Shaibani, H. Etayash, S. Naicker, **K. Kaur**, T. Thundat*, Metabolic Study of Cancer Cells using a pH Sensitive Hydrogel Nanofiber Light Addressable Potentiometric Sensor (NF-LAPS), *ACS Sens.* **2017**, *2*, 151-156. (Dec 29, 2016)
14. R. Soudy, A. Patel, W. Fu, **K. Kaur**, D. MacTavish, D. Westaway, R. Davey, J. Zajac, J. Jhamandas*, Cyclic AC253, a novel amylin receptor antagonist, improves cognitive deficits in a mouse model of Alzheimer's Disease, *Alzheimer's & Dementia: Translational Research & Clinical Interventions*, **2017**, *3*, 44-56. (Nov, 2016)

15. H. Etayash, M.F. Khan, **K. Kaur***, T. Thundat*, Microfluidic cantilever detects bacteria and measures their susceptibility to antibiotics in small confined volumes, *Nature Comm.* **2016**, *7*, 12947. (Oct 4, 2016)
16. H. Etayash, A.R. McGee, **K. Kaur**, T. Thundat*, Nanomechanical sandwich assay for multiple cancer biomarkers in breast cancer cell-derived exosomes, *Nanoscale* **2016**, *8*, 15137-41. (Aug 18, 2016)
17. **K. Kaur***, O. Tarassova, R.V. Dangeti, S. Azmi, D. Wishart, L. McMullen, M. Stiles, Characterization of a highly potent antimicrobial peptide microcin N from Uropathogenic *Escherichia coli*, *FEMS Microbiol. Lett.* **2016**, *11*, 363. (Apr 15, 2016)
18. H. Etayash, K. Jaing, S. Azmi, T. Thundat, **K. Kaur***, Real-time Detection of Breast Cancer Cells Using Peptide-functionalized Microcantilever Arrays, *Sci. Rep. (Nature Publishing Group)*, **2015**, *5*, 13967:1-13. (Oct 5, 2015).
19. K. Jiang, H. Etayash, S. Azmi, S. Naicker, M. Hassanpourfard, P.M. Shaibani, G. Thakur, **K. Kaur**, T. Thundat*, Rapid Label-free Detection of *E. coli* using Antimicrobial Peptide Assisted Impedance Spectroscopy, *Anal. Methods*, **2015**, *7*, 9744-9748. (Aug 25, 2015)
20. H. Etayash, S. Azmi, R. Dangeti, **K. Kaur***, Peptide Bacteriocins – Structure Activity Relationships, *Curr. Top. Med. Chem.*, **2015**, *16*, 220-241. (Aug 12, 2015)
21. H. Trzeciakiewicz, J. Esteves-Villanueva, R. Soudy, **K. Kaur**, S. Martic-Milne*, Electrochemical Characterization of Protein Adsorption onto YNGRT-Au and VLGXE-Au Surfaces, *Sensors*, **2015**, *15*, 19429-19442. (Aug 7, 2015)
22. M. H. Gilzad-Kohan*, **K. Kaur**, and F. Jamali, Synthesis and characterization of a new peptide prodrug of glucosamine with enhanced gut permeability, *PLoS One*, **2015**, *10*(5), e0126786. (May 15, 2015)
23. S. Azmi, K. Jaing, T. Thundat, **K. Kaur***, Detection of *Listeria monocytogenes* with short peptide fragments from class IIa bacteriocins as recognition elements, *ACS Comb. Sci.*, **2015**, *17*, 156-163. (selected for cover page picture) (Mar 9, 2015)
24. **K. Kaur***, S. Bhattacharjee, R. Pillai, S. Ahmed, S. Azmi, Peptide Arrays for Detecting Naphthenic Acids in Oil Sands Process Affected Water, *RSC Advances*, **2014**, *4*, 60694-60701. (Nov 4, 2014)
25. S. Ahmed, T. Sprules, and **K. Kaur***, Structural similarity between β^3 -Peptides synthesized from and β^3 -homo-amino acids and L-aspartic acid monomers, *Biopolymers (Peptide Science)*. **2014**, *102*, 359-367.
26. N.S.K. Gunda, M. Singh, L. Norman, **K. Kaur**, and S.K. Mitra*, Optimization and characterization of biomolecule immobilization on silicon substrates using (3-aminopropyl)triethoxysilane (APTES) and glutaraldehyde link, *Applied Surface Science. Microdevices*, **2014**, *305*, 522-530.
27. H. Etayash, K. Jaing, T. Thundat, **K. Kaur***, Impedimetric Detection of Pathogenic Gram-Positive Bacteria using An Antimicrobial Peptide from Class IIa Bacteriocins, *Anal. Chem.*, **2014**, *86*, 1693-1700.
28. H. Etayash, L. Norman, T. Thundat, M. Stiles, **K. Kaur***, Surface Conjugated Antimicrobial Peptide Leucocin A Displays High Binding to Pathogenic Gram-positive Bacteria, *ACS Appl. Mater. Interfaces*, **2014**, *6*, 1131-1138.
29. R. Soudy, C. Chen, and **K. Kaur***, Novel Peptide-Doxorubicin Conjugates for Targeting Breast Cancer Cells including the Multidrug Resistant Cells, *J. Med. Chem.*, **2013**, *56*, 7564-7573.

30. M. H. Gilzad-Kohan, **K. Kaur**, and F. Jamali*, The Antiinflammatory Action and Pharmacokinetics of a Novel Di-Peptide Aminosugar, *J. Pharm. Pharm. Sci.*, **2013**, *16*, 279-288.
31. N.S.K. Gunda, M. Singh, Y. Purwar, S.L. Shah, **K. Kaur**, and S.K. Mitra*, Micro-spot with Integrated Pillars (MSIP) for Detection of Dengue Virus NS1, *Biomed. Microdevices*, **2013**, *15*, 959-971.
32. A.S. Mathews, S. Ahmed, M. Shahin, A. Lavasanifar and **K. Kaur***, Peptide modified Polymeric Micelles Specific for Breast Cancer Cells, *Bioconjugate Chem.*, **2013**, *24*, 560-570.
33. K. Bodapati, R. Soudy, H. Etayash, Michael Stiles, and **K. Kaur***, Design, Synthesis and Evaluation of Antimicrobial Activity of N-Terminal Modified Leucocin A Analogues, *Bioorg. Med. Chem.*, **2013**, *21*, 3715-3722.
34. H. Etayash, L. Norman, T. Thundat, **K. Kaur***, Peptide-Bacteria Interactions using Engineered Surface Immobilized Peptides from Class IIa Bacteriocins, *Langmuir*, **2013**, *29*, 4048-4056.
35. A. Sohrabi, P.M. Shaibani, H. Etayash, **K. Kaur**, T. Thundat*, Sustained drug release and antibacterial activity of ampicillin incorporated poly(methyl methacrylate)-nylon6 core/shell nanofibers, *Polymer*, **2013**, *54*, 2699-2705.
36. M. Shahin, R. Soudy, H.M. Aliabadi, N. Kneteman, **K. Kaur**, A. Lavasanifar*, Engineered breast tumor targeting peptide ligand modified liposomal doxorubicin and the effect of peptide density on anticancer activity, *Biomaterials* **2013**, *34*, 4089-4097.
37. R. Soudy, S. Ahmed and **K. Kaur***, NGR Peptide Ligands for Targeting CD13/APN Identified through Peptide Array Screening Resemble Fibronectin Sequences, *ACS Comb. Sci.*, **2012**, *14*, 590-599. ([selected for cover page picture](#))
38. M. Shahin, R. Soudy, H. El-Sikhry, J.M. Seubert, **K. Kaur**, A. Lavasanifar*, Engineered peptides for the development of actively tumor targeted liposomal carriers of doxorubicin, *Cancer Lett.*, **2012**, *334*, 284-292.
39. D. Raghuvanshi, V. Mishra, M.R. Suresh, **K. Kaur***, A simple approach for enhanced immune response using engineered dendritic cell targeted nanoparticles, *Vaccine*, **2012**, *30*, 7292-7299.
40. R. Soudy, L. Wang, and K. Kaur*, Synthetic Peptides derived from the Sequence of a Lasso Peptide Microcin J25 show Antibacterial Activity, *Bioorg. Med. Chem.*, **2012**, *20*, 1794-1800.
41. D. Raghuvanshi, V. Mishra, D. Das, **K. Kaur***,* and M.R. Suresh, Dendritic Cell Targeted Chitosan Nanoparticles for Nasal DNA Immunization against SARS CoV Nucleocapsid Protein, *Mol. Pharmaceutics* **2012**, *9*, 946-956.
42. R. Soudy, A. Gill, T. Sprules, A. Lavasanifar, and **K. Kaur***, Proteolytically Stable Cancer Targeting Peptides with High Affinity for Breast Cancer Cells, *J. Med. Chem.*, **2011**, *54*, 7523-7534.
43. W. Soliman, L.Wang, S. Bhattacharjee, and **K. Kaur***, Structure-activity relationships of an antimicrobial peptide Plantaricin S from two-Peptide class IIb bacteriocins, *J. Med. Chem.* **2011**, *54*, 2399-2408.
44. M. Shahin, S. Ahmed and **K. Kaur**, A. Lavasanifar*, Decoration of polymeric micelles with cancer-specific peptide ligands for active targeting of paclitaxel, *Biomaterials* **2011**, *32*, 5123-5133.
45. M. Abbasi, H.M. Aliabadi, E.H. Moase, A. Lavasanifar, **K. Kaur**, R. Lai, C. Doillon, H. Uludağ*, siRNA-Mediated Down-Regulation of P-glycoprotein in a Xenograft Tumor Model in NOD-SCID Mice, *Pharm. Res.* **2011**, *28*, 2516-2529.

46. S. Ahmed, A.S. Mathews, N. Byeon, A. Lavasanifar, **K. Kaur***, Peptide Arrays for Screening Cancer Specific Peptides. *Anal. Chem.*, **2010**, *82*, 7533-7541.
47. W. Soliman, S. Bhattacharjee, and **K. Kaur***, Adsorption of an Antimicrobial Peptide on Self-Assembled Monolayers by Molecular Dynamics Simulation, *J. Phys. Chem. B* **2010**, *114*, 11292-11302.
48. W. Soliman, S. Bhattacharjee, and **K. Kaur***, Interaction of an Antimicrobial Peptide with a Model Lipid Bilayer using Molecular Dynamics Simulation, *Langmuir* **2009**, *25*, 6591-6595.
49. S. Ahmed and **K. Kaur***, The Proteolytic Stability and Cytotoxicity Studies of L-Aspartic Acid and L-Diaminopropionic Acid derived β -Peptides and a Mixed α/β -Peptide, *Chem. Biol. Drug Des.* **2009**, *73*, 545-552.
50. R. Beleid, D. Douglas, N. Kneteman, and **K. Kaur***, Helical peptides derived from lactoferrin bind hepatitis C virus envelope protein E2, *Chem. Biol. Drug Des.* **2008**, *72*, 436-443.
51. **K. Kaur***, T. Sprules, W. Soliman, R. Beleid, S. Ahmed, Right-handed 14-Helix in beta(3)-Peptides from L-Aspartic Acid Monomers, *Biochim. Biophys. Acta* **2008**, *1784*, 658-665.
52. W. Soliman, S. Bhattacharjee, and **K. Kaur***, Molecular dynamics simulation study of interaction between a class IIa bacteriocin and its immunity protein, *Biochim. Biophys. Acta* **2007**, *1774*, 1002-1013.
53. S. Ahmed, R. Beleid, T. Sprules, and **K. Kaur***, Solid-phase synthesis and CD spectroscopic investigations of novel β -peptides from L-aspartic acid and β -amino-L-alanine, *Org. Lett.* **2007**, *9*, 25-28.
54. L.J. Gursky, N.I. Martin, D.J. Derksen, M.J. Van Belkum, **K. Kaur**, J.C. Vederas, M.E. Stiles, L.M. McMullen*, Production of piscicolin 126 by *Carnobacterium maltaromaticum* UAL26 is controlled by temperature and induction peptide concentration, *Arch. Microbiol.* **2006**, *186*, 317-325.
55. **K. Kaur**, L.C. Andrew, D.S. Wishart, and J.C. Vederas*, Dynamic relationships among type IIa bacteriocins: Temperature effects on antimicrobial activity and on structure of the C-terminal amphipathic α -helix as a receptor binding region, *Biochemistry* **2004**, *43*, 9009-9020.
56. N.R. Silvaggi, **K. Kaur**, S.A. Adediran, R.F. Pratt*, and J.A. Kelly*, Toward better antibiotics: Crystallographic studies of a novel class of DD-peptidase/ β -lactamase inhibitors, *Biochemistry* **2004**, *43*, 7046-7053.
57. **K. Kaur**, S.A. Adediran, M.J.K. Lan, and R.F. Pratt*, Inhibition of β -lactamases by monocyclic acyl phosph(on)ates, *Biochemistry* **2003**, *42*, 1529-1536.
58. **K. Kaur**, M.J.K. Lan, and R.F. Pratt*, Mechanism of inhibition of the class C β -lactamase of *Enterobacter cloacae* P99 by cyclic acyl phosph(on)ates: Rescue by return, *J. Am. Chem. Soc.* **2001**, *123*, 10436-10443.
59. **K. Kaur** and R.F. Pratt*, Mechanism of reaction of acyl phosph(on)ates with the β -lactamase of *Enterobacter Cloacae* P99, *Biochemistry* **2001**, *40*, 4610-4621.
60. R.G. Salomon*, **K. Kaur**, and E. Batyрева, Isolevuglandin-protein adducts in oxidized low density lipoprotein and human plasma: A strong connection with cardiovascular disease, *Trends Cardiovasc. Med.*, **2000**, *10*, 53-59.
61. R.G. Salomon*, **K. Kaur**, E. Podrez, H.F. Hoff, A.V. Krishinsky, L.M. Sayre, HNE-derived 2-pentylpyrroles are generated during oxidation of LDL, are more prevalent in blood plasma from

patients with renal disease or atherosclerosis, and are present in atherosclerotic plaques, *Chem. Res. Toxicol.*, **2000**, *13*(7), 557-564.

62. R.G. Salomon*, E. Batyreva, **K. Kaur**, D. Sprecher, M.J. Schreiber, J.W. Crabb, M.S. Penn, A.M. DiCorleto, S.L. Hazen, E.A. Podrez, Isolevuglandin-protein adducts in humans: products of free radical-induced lipid oxidation through the isoprostane pathway, *Biochim. Biophys. Acta*, **2000**, *1485*(2-3), 225-235.
63. R.G. Salomon*, W. Sha, C. Brame, **K. Kaur**, G. Subbanagounder, J. O'Neil, H.F. Hoff and L.J. Roberts II, Protein adducts of iso[4]levuglandin E₂, a product of the isoprostane pathway, in oxidized low density lipoprotein, *J. Biol. Chem.*, **1999**, *274*(29), 20271-20280.
64. **K. Kaur**, R.G. Salomon*, J. O'Neil, and H.F. Hoff, Carboxyalkyl pyrroles in human plasma and oxidized low density lipoproteins, *Chem. Res. Toxicol.*, **1997**, *10*(12), 1387-1396.
65. R.G. Salomon*, G. Subbanagounder, J. O'Neil, **K. Kaur**, M.A. Smith, H.F. Hoff, G. Perry, and V.M. Monnier, Levuglandins E₂-protein adducts in human plasma and vasculature, *Chem. Res. Toxicol.*, **1997**, *10*(5), 536-545.
66. L.M. Sayre, W. Sha, G. Xu, **K. Kaur**, D. Nadkarni, G. Subbanagounder, and R.G. Salomon*, Immunochemical evidence supporting 2-pentylpyrrole formation on proteins exposed to 4-hydroxy-2-nonenal, *Chem. Res. Toxicol.*, **1996**, *9*(7), 1194-1201.
67. Y.D. Vankar*, G. Kumaravel, I. Bhattacharya, P.S. Vankar, and **K. Kaur**, Reactions of 2-phenylthio-2-cycloalkenones and 2-[phenyl(thiomethyl)]-2-cycloalkenones: Synthesis of some useful chiral and achiral intermediates, *Tetrahedron*, **1995**, *51*, 4829-4840.

BOOK CHAPTERS

68. H. Etayash, T. Thundat, **K. Kaur***, Bacterial Detection using Peptide-based Platform and Impedance Spectroscopy, in *Methods Mol. Biol.*, Biosensors and Biodetection: Methods and Protocols, Second Edition, Edited by Avraham Rasooly and Ben Prickril, **2017**, Vol 1572, 113-124.
69. **K. Kaur***, S. Ahmed, R. Soudy, S. Azmi, Screening Peptide Array Library for the Identification of Cancer Cell Binding Peptides, in *Methods Mol. Biol.*, Peptide Libraries, Edited by R. Derda, Springer, **2015**, Vol 1248, 239-247.
70. S. Bhattacharjee and **K. Kaur**, van der Waals and Casimir Interactions, in *Microfluidics and Nanofluidics Handbook*, Edited by S. K. Mitra and S. Chakraborty, CRC Taylor and Francis, **2011**.
71. **K. Kaur***, D. Das, M. Suresh, Protein-Protein Interactions, in *Preclinical Development Handbook*, ADME and Biopharmaceutical Properties, Edited by Shayne C. Gad, John Wiley & Sons, Inc., NJ, USA **2008**, pp 87-116.

PATENTS

1. Kamaljit Kaur and Hanieh Hossein-Nejad-Ariani, Rapid Selective Detection of *Listeria monocytogenes*, U.S. non Provisional Patent filed Nov 14, 2018 (application # 1959206-00007), U.S. Provisional Patent filed Nov 10, **2017**.
2. Jack Jhamandas, Rania Soudy, Kamaljit Kaur, When Fu, David, Mactavish, Aarti Patel, Brain Penetrant Amylin Receptor Based Peptides for Alzheimer's Disease, U.S. Patent Application No. 62/396,370 filed Sep 15, **2017**.

3. Fahkreddin Jamali, Kamaljit Kaur, Mohammadhossien Gilzad, Glucosamine Pro-drugs, U.S. Patent Application No. 13/622,516 filed Sep 2012, Patent No. 8772227, issue date July 08, **2014**.

INVITED SPEAKER

1. Peptide Engineering for Targeting Pathogenic Bacteria and Cancer Cells, College of Osteopathic Medicine, Western University of Health Sciences, Pomona, California, USA, Dec 14, **2018**
2. Microcantilever arrays functionalized with a breast cancer targeting peptide as detection platforms for circulating tumor cells, Chemistry & Biology of Peptides, Gordon Research Conference, Ventura, California, USA, February 21 – 26, **2016**.
3. Peptide-functionalized microcantilever arrays as detection platforms for circulating tumor cells in human blood, PACIFICHEM 2015, Honolulu, Hawaii, USA, Dec 19, **2015**.
4. Peptide-based Platforms as Biosensors for Bacteria and Circulating Tumor Cells, School of Pharmacy, Chapman University, Irvine, California, USA, Apr 01, **2015**.
5. Peptide Engineering for Targeting Pathogenic Bacteria and Cancer Cells, Department of Chemistry, Indian Institute of Technology Delhi, New Delhi, India, Aug 12, **2014**.
6. The Power of Peptides in Cancer Treatment and other Biomedical Applications, Edmonton Biology and Chemistry Regional's Annual Conference, Edmonton, Alberta, Canada, May 02, **2014**.
7. Peptide Engineering for Biomedical Applications, Canadian Federation of University Women, Edmonton, Alberta, Canada, 18th November **2013**.
8. Engineering Proteolytically Stable Peptides for Cancer Targeting, 3rd Euro-India International Conference on Nanomedicine and Tissue Engineering, Kottayam, Kerala, India, 9th August **2013** (Symposium: Nanotechnology for Cancer).
9. Peptide Engineering for Food Safety and Biomedical Applications, Department of Chemical Technology, University of Calcutta, Calcutta, India, 7th August **2013**.
10. Peptide Engineering for Targeting Pathogenic Bacteria and Cancer Cells, Department of Pharmaceutical Sciences, University of California, Irvine, California, USA, 26th June **2013**.
11. Peptide Engineering for Improving the Outcome of Current Therapeutics and Diagnostics for Cancer, 3rd Western Canadian Medicinal Chemistry Workshop, Saskatoon, Saskatchewan, Canada, September 28-30, **2012**.
12. Peptides for Targeting Anticancer Drugs Specifically to the Cancer Site, 95th Canadian Chemistry Conference and Exhibition, Calgary, Alberta, Canada, May 30, **2012**. (Symposium: Antimicrobial and Host-defense Peptides).
13. Peptide Engineering for Targeting Cancer Cells, Leslie Dan Faculty of Pharmacy, University of Toronto, Toronto, Ontario, 11th Nov **2011**.
14. Engineering Small Peptides for Cancer Drug Delivery and Diagnostics, Department of Chemistry, New York University, New York, USA, 7th Nov **2011**.
15. Engineering Biologically Active Peptides, Department of Chemistry, Wesleyan University, Connecticut, USA, 4th Nov **2011**.
16. Engineering Proteolytically Stable Breast Cancer Targeting Peptides, 94th Canadian Chemistry Conference and Exhibition, Montreal, Quebec, Canada, June 5- 9, **2011**. (Symposium: Peptide Science).

17. Peptide Arrays for Screening Cancer Targeting Agents, International Science and Technology Partnership (ISTP) Indo-Canadian Workshop, Joint Indo-Canadian Meeting on Development of Low-Cost Lab-on-a-chip Medical Devices for Health Monitoring, IIT Bombay, India, January 7-11, **2011**.
18. Cancer Targeting Peptides from Peptide Arrays, PACIFICHEM, Honolulu, Hawaii, USA, Dec 17, **2010**. (Symposium: Protein, Peptide, and Peptidomimetics Design by the International Chemical Congress of Pacific Basin Societies).
19. Peptide Arrays for Selecting Cancer Targeting Peptides, 93rd Canadian Chemistry Conference and Exhibition, Toronto, ON, Canada, May 29- June 2, **2010**. (Symposium: Peptides and Their Pharmaceutical Relevance, organized by Eli Lilly Inc. Canada).
20. Design and Synthesis of Novel β -peptides as Entry Inhibitors of Hepatitis C Virus, 89th Canadian Chemistry Conference and Exhibition, Halifax, NS, Canada, May 28, **2006**. (Symposium: Peptide Science).
21. Peptides as therapeutics: Simulation of peptide-peptide interactions, Faculty of Pharmacy and Pharmaceutical Sciences, University of Alberta, Edmonton, Alberta, November **2005**.
22. Alternatives to Antibiotics: Structure & Mechanism of Antimicrobial Peptides from Lactic Acid Bacteria, Faculty of Pharmacy and Pharmaceutical Sciences, University of Alberta, Edmonton, Alberta, October **2003**.
23. Mechanism of Inhibition of *Enterobacter cloacae* P99 β -Lactamase by Cyclic Acyl Phosphate, Department of Chemistry, Wesleyan University, Middletown, Connecticut, October **2000**.
24. Two-faced Substrates/Inhibitors of Class C β -Lactamase of *Enterobacter cloacae* P99, Department of Chemistry, Wesleyan University, Middletown, Connecticut, September **1999**.

CONFERENCE PRESENTATIONS

>85 oral or poster presentations at the national or international conferences.

III. TEACHING

A. TEACHING

Pharm. D. Courses (Currently taught)

PHRM 552 - Pharmacology/Med Chem, Integrated Therapeutics: Infectious Diseases I

PHRM 546 - Med Chem, Integrated Therapeutics: Gastroenterology

PHRM 537 - Med Chem, Integrated Therapeutics: Cardiology

PHRM 534 - Med Chem, Integrated Therapeutics: Dermatology & Rheumatology

Graduate Courses (Currently taught)

PHS 612 - Advanced Principles of Drug Action

PHS 702 - Research Methods

Undergraduate Courses (taught in the past at University of Alberta)

PHARM 301 - Principles of Drug Action and Disposition - Introduction to Medicinal Chemistry
PHARM 307 - Medicinal Chemistry, Dermatology Module
PHARM 357 - Medicinal Chemistry, Gastrointestinal Module
PHARM 437 - Medicinal Chemistry, Bone and Joint Module
PHARM 499 - Medicinal Chemistry, Women's and Men's Health Module
PHARM 498 - Research and Directed Studies
PHARM 341 - Pharmaceutical Analysis
PHARM 367 - Medicinal Chemistry, Cardiology Module
PHARM 417 - Medicinal Chemistry, Neurology Module
IntD 410 - Interdisciplinary Health Team Development

Graduate Courses (taught in the past at University of Alberta)

PHARM 570 - Advanced Pharmaceutical Analysis (UV/Vis, IR, Raman, and NMR Spectroscopy)
PHARM 573 - Analytical Techniques in Pharmaceutical Sciences (Extraction methods, Fluorescence Spectroscopy and Isothermal Titration Calorimetry)
PHARM 610 - Advanced Drug Delivery Systems (Peptides and Proteins for Drug Targeting)

B. POSTDOC/STUDENT SUPERVISION**Postdoctoral Fellows**

Dr. Hanieh Ariani

Period: 03/2016- 09/2018

Project: Engineering peptide-drug conjugates for targeting breast cancer cells

Dr. Amaresh Sahoo

Period: 09/2015- 01/2016

Project: Peptide-based platforms for detection of bacteria

Dr. Rania Soudy (co-supervised)

Period: 01/2014- 05/2016

Project: Peptide antagonists for Amylin receptor

Dr. Ramana Dangeti (co-supervised)

Period: 06/2013- 04/2016

Project: Bacteriocins as alternatives to conventional antibiotics

Dr. Sarfuddin Azmi

Period: 03/2013- 01/2015

Project: Engineering antimicrobial peptides for detecting pathogenic Gram-positive bacteria

Dr. Sahar Ahmed

Period: 09/2011- 08/2012

Project: Development of peptide-based diagnostic assay for quantification of polyaromatic acids

Dr. Anu Mathews (co-supervised)

Period: 09/2009- 08/2010

Project: Peptide-micelle engineering for the design of novel specific cancer targeting agents

Graduate Students

Current

Ph.D. Elmira Ziaei
 Ph.D. Azam Saghaeidehkordi
 MSPS Cassandra Dill

Completed

Ph.D. Hashem Etayash, 2017 (co-supervised, main supervisor: K. Kaur)
 Ph.D. Hamed Kohan, 2013 (co-supervised, main supervisor: F. Jamali)
 Ph.D. Rania Soudy, 2012
 Ph.D. Dharmendra Raghuwanshi, 2012
 Ph.D. Wael Soliman, 2011
 Ph.D. Sahar Ahmed, 2010

MSPS Emad Althagafi, Aug 2018
 MSPS Azam Saghaeidehkordi, Aug 2018
 MSPS Yazeed Alanazi, Apr 2018
 MSPS Elmira Ziaei, Dec 2017
 MSPS Kim Tushar, Aug 2017

M.Sc. Yogita Raghuwanshi, 2015
 M.Sc. Harpreet Dhingra, 2013 (co-supervised by K. Kaur and B. Singh)
 M.Sc. Hashem Etayash, 2012
 M.Sc. Minashree Singh, 2012 (co-supervised, main supervisor: S. Mitra)
 M.Sc. Krishna Bodapati, 2011
 M.Sc. Gagandeep Kharaud, 2010
 M.Sc. Reem Beleid, 2008

Other Students (Pharm.D. or Undergraduate Research Students)

7 Students at Chapman University School of Pharmacy (2016-2019; Students enrolled as Capstone, Pharm.D. research or Student faculty independent research 491)

11 Students at Faculty of Pharmacy and Pharmaceutical Sciences, University of Alberta (2004-2014; Students enrolled as Summer Research Students)

1V. SERVICE

A. STUDENT COMMITTEES

Supervisory Committee Member (2015-present)

Supervisory committee member for 8 MSPS students at CUSP

Examining Committee Member (2004-2017)

Examiner for a total of 45 exams (M.Sc. thesis defense or Ph.D. candidacy exam or Ph.D. thesis defense)

Supervisory Committee Member (2004-2015)

Supervisory committee member for 11 students (M.Sc. or Ph.D.) at University of Alberta

B. COMMITTEES**At School of Pharmacy and University**

2016-present	Chair, Faculty Review Committee CUSP
2016-2018	Chair, Science Committee, CUSP
2016-2017	Chair, Faculty Search Sub-Committee-Natural Products, BPS (CUSP)
2015-2016	Chair, Faculty Search Sub-Committee-Immunology, BPS (CUSP)
2019-present	Member, University Assessment Committee
2018-present	Member, Faculty Grievance Board, Chapman University
2018-present	Member, Science Committee, CUSP
2017-present	Member, Strategic Planning Committee, CUSP
2017-present	Member, Student Affairs Committee, CUSP
2017-2018	Member, Item Review Committee, CUSP
2015-2016	Member, Faculty Review Committee CUSP
2014-2017	Member, Assessment Committee, CUSP

C. VOLUNTEER AND PUBLIC SERVICE1. **Session Co-Chair at a Conference (2019)**

Co-Chair of the Session “*Peptides as Cellular Reagents*” held at American Peptide Symposium, Monterey, CA, USA, June 22-27, 2019.

- Judge for the “Irvine Unified School District’s 38th Annual Science Fair” at the Northwood High School, Irvine, CA, USA, Feb 06, 2019.
- Invited Presentation at the “21st Century Career Conference” organized by Irvine Unified School District (IUSD), The Beckman Center, Irvine, CA, USA, Dec 13, 2018.
- Organized the first “Chapman University School of Pharmacy Research Day” as the chair of the CUSP Science Committee, May 04, 2018.
- Volunteer at the Irvine Unified School District - Ask-A-Scientist/Engineer Night, Rancho San Joaquin Middle School, Irvine, CA, Aug 31, 2017.
- Judge for the “Poster Presentation Competition” at the 25th American Peptide Symposium, Whistler, BC, Canada, June 17-22, 2017.
- Judge for the “Poster Presentation Competition” at the 2016 Irvine Unified School District Science Fair, Irvine High School, Irvine, USA, Feb 23, 2016.

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8. Symposia Co-Organizer and Session Co-Chair at a Conference (2015)
Co-Organizer and Session Co-Chair of the Symposium “*Cancer Targeted Delivery of Therapeutics and Diagnostics*” held at PACIFICHEM 2015, Honolulu, Hawaii, USA, Dec 15-20, 2015.
 9. Wrote an article for Orange County Register “In Living Textbooks”, June 2015.
 10. Judge for the “PDF Poster Presentation Competition” at the 3rd Western Canadian Medicinal Chemistry Workshop, Saskatoon, SK, Canada, September 28-30, 2012.
 11. Session Chair at a Conference (2012)
Chaired a session for the Symposium “*Interfacial Phenomena at Micro and Nanoscale*” held at the 10th International Conference on Nanochannels, Microchannels and Minichannels (ICNMM), ASME 2012, Rio Grande, Puerto Rico, July 8-12, 2012.
 12. Workshop at IIT Bombay, India (2011)
Participated in a Science and Technology Partnership (ISTP) Indo-Canadian Workshop “Joint Indo-Canadian Meeting on Development of Low-Cost Lab-on-a-chip Medical Devices for Health Monitoring” January 7-11, 2011, IIT Bombay, India
Oral invited presentation at the workshop: Kaur, K. Peptide arrays for screening cancer targeting agents
 13. Judge for the “Graduate Student Oral Presentation Competition” at the 94th Canadian Chemistry Conference and Exhibition, Montreal, Quebec, Canada, June 5- 9, 2011.
 14. Judge for the student presentations (oral and poster) at the “Annual Faculty Research and Development Day” 2005-present.
 15. Medicinal Chemistry Laboratory Orientation: High School Students, Women in Scholarship, Engineering, Science and Technology (WISEST) Program (2010)
 16. Reviewer for British Columbia Innovation Scholars (2010)
 17. Reviewer for GSK/AFPC Student Paper Awards (2010, 2011)
 18. Symposia Organizer and Session Chair at a Conference (2009)
Organizer and Session Chair of the Symposium “*Peptides and Peptidomimetics*” held at 92nd Canadian Chemistry Conference and Exhibition, Hamilton, ON, Canada, May 30- June 3, 2009
 19. External Ph.D. Proposal Reviewer, School of Medicine, University of Alberta (2008)
 20. Supported Heritage Youth Researcher Summer (HYRS) Program by training a high school student (2005)