

CURRICULUM VITAE

IDENTIFYING INFORMATION

Academic Rank

Professor, Department of Medicinal Chemistry
 Graduate Faculty Appointment in Graduate Program in Medicinal Chemistry
 UF Cancer Center Member

Education

Degree	Institution	Date Degree Granted
B.S.	Dalian University of Technology Area: chemistry and chemical engineering	1991 – 1996
Ph.D.	Arizona State University Area: organic chemistry/Department of Chemistry and Biochemistry Advisor: Edward B Skibo	1996 – 2001

Positions/Employment

University of Florida, Gainesville Frank A. Duckworth Eminent Scholar Chair and Professor Associated Chair	2016 – present 2018 – present
University of Minnesota, Twin Cities Campus Professor Associate Professor Assistant Professor	2003 – 2016 2014 – 2016 2009 – 2014 2003 – 2009
Postdoctoral appointments Harvard University, Department of Chemistry and Chemical Biology	2001 – 2003
Graduate appointments Graduate Research Assistant Graduate Teaching Assistant	1998 – 2001 1996 – 1998

Current Membership in Professional Organizations

UF Health Cancer Center	2016 – present
UF CNPD3	2016 – present
Society of Toxicology	2013 – present
American Association for Cancer Research	2004 – present
American Association of the Colleges of Pharmacy	2003 – present
American Chemical Society	1998 – present

HONORS AND AWARDS FOR RESEARCH/CREATIVE WORK, TEACHING, PUBLIC ENGAGEMENT, AND SERVICE

University of Minnesota

Pharmacy Professional Teaching Award	2014 – 2015
Pharmacy Professional Teaching Award	2006 – 2007
AACP Young Investigator Award	2005 – 2006

External Sources

Graduate Fellowship	1996 – 1997
Mathematics Championship of Dalian University of Technology	1993
National Chemistry Championship of China, Liaoning Region	1990
National Mathematics Championship of China, Liaoning Region	1989

RESEARCH, SCHOLARSHIP, AND CREATIVE WORK

Grants and Contracts

External Sources

Active

Role: Principal investigator
Agency: NIH – NCI/R01CA193278
Title: Dihydromethysticin (DHM) for lung cancer chemoprevention
Period: 2015 – 2020
Direct cost: \$228,750/year

Role: Principal investigator
Agency: NIH – NCI/R01CA193278/supplement
Title: Dihydromethysticin (DHM) for lung cancer chemoprevention
Period: 2018 – 2019
Direct cost: \$55,687/year

Role: co-I (PI: Licht)
Agency: Mangurian Foundation
Title: Support for the Study of therapy Resistance
Period: 2017 – 2019
Direct cost: \$95,000/year

Role: PI
Agency: UF Cancer Center
Title: Exploring kava to reduce tobacco use and carcinogenesis risk among head and neck cancer survivor smokers
Period: 2018 – 2020
Direct cost: \$70,000 total

Role: PI
Agency: UF SPORE Seed Grant/HERI
Title: Reducing lung cancer risk and advancing health equity by promoting tobacco cessation and enhancing tobacco carcinogen detoxification with dietary supplement kava
Period: 2018 – 2019
Direct cost: \$12,500 total

Role: MPI (contact)
Agency: NIH/NCCIH
Title: A phased clinical trial of a dietary supplement kava: biomarker changes and anxiolytic effects
Period: 2019 – 2024
Direct cost: \$1,550,000 direct cost for five years

Pending

Role: subcontract PI
Agency: NIH
Title: MGMT down-regulation in the carcinogenicity of hexavalent chromium
Period: 2020 – 2025
Direct cost: \$125,000 direct cost five years

Role: subcontract PI
Agency: NIH
Title: PennState BDSRC on Resilience Against Cancer
Period: 2020 – 2025
Direct cost: \$250,000 direct cost five years

Role: PI
Agency: Florida State – James Ether King mechanism
Title: Potential of kava in promoting tobacco cessation, reducing carcinogenesis risk, and associated disparities
Period: 2019 – 2022
Direct cost: \$1,460,761 total (\$639,000 direct cost for Xing lab).

Role: PI
Agency: NIH
Title: Neural regulation of NNK in lung tumorigenesis and opportunities
Period: 2019 – 2021
Direct cost: \$275,000.

Role: PI
Agency: NIH
Title: Contributions of Stress and NNK to Lung Cancer Risk Disparities between AA and CA Smokers
Period: 2020 – 2022
Direct cost: \$275,000.

Role: PI
Agency: NIH
Title: Develop a New Lung Tumorigenesis Mouse Model and Understand the Biology of Lung Preneoplasia
Period: 2020 – 2022
Direct cost: \$275,000.

Role: PI
Agency: NIH
Title: Integrating adductomics in lung cancer risk identification and prevention
Period: 2020 – 2024
Direct cost: \$1,000,000.

Completed

Role: Principal investigator

Agency: NIH – NCI/R01CA163864
Title: Mechanisms of anticancer agents selective against drug resistant leukemia
Period: 2012 – 2018
Direct cost: \$207,500/year

Role: Subcontract Principal Investigator
Agency: NIH – NCCAM/R01AT007395 (PI: Junxuan Lu)
Title: Mechanisms of prostate cancer prevention by Korean Angelica
Period: 2012 – 2015
Direct cost: \$40,000/year

Role: Principal investigator
Agency: NIH – NCI/R01CA142649
Title: Developing a post-carcinogen lung cancer chemopreventive agent
Period: 2010 – 2015
Direct cost: \$720,000

Role: Principal investigator
Agency: NIH – NCI/R03CA156301
Title: An NF- κ B inhibitor as a post-carcinogen lung cancer chemopreventive agent
Period: 2011 – 2013
Direct cost: \$100,000

Role: Principal investigator
Agency: Leukemia Research Fund
Title: Anticancer agents selective against drug resistant AML
Period: 2011 – 2013
Direct cost: \$60,000

Role: Principal investigator
Agency: NIH – NCI/R01CA114294
Title: Bcl-2 selective inhibitors: development and application to cancer treatment
Period: 2006 – 2010
Direct cost: \$560,000

Role: Principal investigator
Agency: Leukemia Research Fund
Title: ER-specific Bcl-2 antagonist for leukemia malignancy
Period: 2008 – 2010
Direct cost: \$60,000

Role: Principal investigator
Agency: NIH – NCI/R03CA125844
Title: Identification of chemopreventive agents against lung tumorigenesis
Period: 2007 – 2008
Direct cost: \$100,000

Role: Principal investigator
Agency: Pancreatic Cancer SPORE Seed Grant, NIH
Title: Identification of chemotherapeutic agents against pancreatic cancer from kava
Period: 2007 – 2008

Direct cost: \$12,500

Role: Principal investigator

Agency: American Association of Colleges of Pharmacy

Title: Studies on Mechanisms of Apoptotic Induction by Inhibitors of Bcl-2 Proteins

Period: 2005 – 2006

Direct cost: \$10,000

Role: PI

Agency: College of Pharmacy UF

Title: Discovering a mechanistically novel anxiolytic agent from kava via in vivo studies

Period: 2017 – 2018

Direct cost: \$30,000/year

Publications

Refereed Journal Articles (use any standard format that the candidate's field uses)

PUBLICATIONS FROM INDEPENDENT RESEARCH

* Denotes corresponding author

- 1 Doshi, J. M.; Tian, D.; Xing, C.* Structure-activity relationship studies of ethyl 2-amino-6-bromo-4-(1-cyano-2-ethoxy-2-oxoethyl)-4H-chromene-3-carboxylate (HA 14-1), an antagonist for anti-apoptotic Bcl-2 proteins to overcome drug resistance in cancer. *J. Med. Chem.* **2006**, *49*, 7731-7739. PMID: 17181155 [PubMed - indexed for MEDLINE].
- 2 Xing, C.*; Wang, L.; Tang, X.; Sham, Y. Y. Development of selective inhibitors for anti-apoptotic Bcl-2 proteins from BHI-1. *Bioorg. Med. Chem.* **2007**, *15*, 2167-2176. PMCID: PMC2001163.
- 3 Doshi, J. M.; Tian, D.; Xing, C.* Ethyl-2-amino-6-bromo-4-(1-cyano-2-ethoxy-2-oxoethyl)-4H-chromene-3-carboxylate (HA 14-1), a prototype small-molecule antagonist against anti-apoptotic Bcl-2 proteins, decomposes to generate reactive oxygen species (ROS) that induce apoptosis. *Mol. Pharmaceut.* **2007**, *4*, 919-928. PMID: 17874842 [PubMed - indexed for MEDLINE].
- 4 Tian, D.; Das, S.; Doshi, J. M.; Peng, J.; Lin, J.; Xing, C.* sHA 14-1, a stable and ROS-free antagonist against anti-apoptotic Bcl-2 proteins, bypasses drug resistances and synergizes cancer therapies in human leukemia cell. *Cancer Lett.* **2008**, *259*, 198-208. PMCID: PMC2693013.
- 5 Wang, L.; Kong, F.; Kokoshi, C. L.; Andrews, D. W.; Xing, C.* Development of dimeric modulators for anti-apoptotic Bcl-2 proteins. *Bioorg. Med. Chem. Lett.* **2008**, *18*, 236-240. PMCID: PMC2266893.
- 6 Wang, L.; Sloper, D. T.; Addo, S. N.; Tian, D.; Slaton, J. W.; Xing, C.* WL-276, an antagonist against Bcl-2 proteins, overcomes drug resistance and suppresses prostate tumor growth. *Cancer Res.* **2008**, *68*, 4377-4383. PMCID: PMC2410026.
- 7 Doshi, J. M.; Xing, C.* Antagonists against anti-apoptotic Bcl-2 family proteins for cancer treatment. *Mini. Rev. Org. Chem.* **2008**, *5*, 171-178. CAN 150:70421.
- 8 Johnson, T. E.; Kassie, F.; O'Sullivan, M. G.; Negia, M.; Hanson, T. E.; Upadhyaya, P.; Ruvolo, P. P.; Hecht, S. S.; Xing, C.* Chemopreventive Effect of Kava on 4-(Methylnitrosamino)-1-(3-pyridyl)-1-butanone Plus Benzo[a]pyrene-Induced Lung

- Tumorigenesis in A/J Mice. *Cancer Prevention Research* **2008**, *1*, 430-438. PMID: 19138990 [PubMed - indexed for MEDLINE].
- 9 Xing, C.*; Johnson, T. E.; Limburg, P. J. Diets, Phytochemicals, and Chemoprevention of Tumorigenesis. *Journal of Dietary Supplements* **2008**, *5*, 95-105.
 - 10 Gupte, A.; Boshoff, H. I.; Wilson, D. L.; Neres, J.; Labello, N. P.; Somu, R.; Xing, C.; Barry, C. E. III.; Aldrich, C. C.* Inhibition of siderophore biosynthesis by 2-triazole substituted analogues of 5'-O-[N-(salicyl)sulfamoyl]adenosine: antibacterial nucleosides effective against *Mycobacterium tuberculosis*. *J. Med. Chem.* **2008**, *51* (23): 7495-7507. PMID: PMC2750848.
 - 11 Srinivasan, B.; Li, Y.; Jing, Y.; Xu, Y.; Xing, C.*; Wang, J. P.* A detection system based on giant magnetoresistive sensors and high-moment magnetic nanoparticles demonstrates zeptomole sensitivity: potential for personalized medicine. *Angew. Chem. Int. Ed.* **2009**, *48* (15):2764-2767. PMID: 19288507 [PubMed - indexed for MEDLINE].
 - 12 Gálvez-Peralta, M.; Hackbarth, J. S.; Flatten, K. S.; Kaufmann, S. H.; Hiasa, H.; Xing, C.; Ferguson, D. M. On the role of topoisomerase I in mediating the cytotoxicity of 9-aminoacridine-based anticancer agents. *Bioorg. Med. Chem. Lett.* **2009**, *19* (15): 4459-4462. PMID: PMC2845530.
 - 13 Hermanson, D.; Addo, S. N.; Bajer, A.; Marchant, J.; Al-Mousa, F.; Michelangeli, F.; LeBien, T. W.; Xing, C.* Dual mechanisms of sHA 14-1 on mitochondria and endoplasmic reticulum in inducing apoptosis. *Mol. Pharmacol.* **2009** *76* (3): 667-678. PMID: PMC2730395.
 - 14 Shaik, A. A.; Hermanson, D. L.; Xing, C.* Identification of methysticin as a potent and non-toxic NF- κ B inhibitor from kava, potentially responsible for kava's chemopreventive activity. *Bioorg. Med. Chem. Lett.* **2009** *19* (19) 5732-5736. PMID: PMC2756981.
 - 15 Das, S. G.; Doshi, J. M.; Tian, D.; Addo, S. N.; Srinivasan, B.; Hermanson, D.; Xing, C.* Structure activity relationships and molecular mechanisms of sHA 14-1 and its analogs. *J. Med. Chem.* **2009**, *52*(19) 5937-5949. PMID: 19743858 [PubMed - indexed for MEDLINE].
 - 16 Srinivasan, B.; Johnson, T. E.; Lad, R.; Xing, C.* Structure-activity relationship studies of chalcone leading to 3-hydroxy-4,3',4',5'-tetramethoxychalcone and its analogs as potent NF- κ B inhibitors and its anticancer activities. *J. Med. Chem.* **2009** *52*(22) 7228-7235. PMID: 19883086 [PubMed - indexed for MEDLINE].
 - 17 Xiao, G.; Fang, H.; Xing, C.; Xu, W. Structure, function and inhibition of Bcl-2 family proteins: a new target for anti-tumor agents. *Mini. Rev. Med. Chem.* **2009**, *9*(14), 1596-1604. PMID: 20236080 [PubMed - indexed for MEDLINE].
 - 18 Zhang, Q.; Srinivasan, B.; Li, Y.; Jing, Y.; Xing, C.; Chang, J.; Wang, J. P. A new and facile method for measurement of apparent density of monodisperse polymer beads. *Talanta* **2010**, *80*, 1681-1685. PMID: 20152396 [PubMed - indexed for MEDLINE].
 - 19 Synthesis and Cancer Cell Cytotoxicity of Substituted Xanthenes. Giri, R.; Goodell, J. R.; Xing, C.; Benoit, A.; Kaur, H.; Hiasa, H.; Ferguson, D. M. *Bioorg. Med. Chem. Lett.* **2010**, *18*(4), 1456-1463. PMID: 20129790 [PubMed - indexed for MEDLINE].
 - 20 Li, Y.; Srinivasan, B.; Jing, Y.; Yao, Y.; Hugger, M. A.; Wang, J. P.*; Xing, C.* Competition-based nanomagnetic quantification of biomarkers in unprocessed sera for early disease detection. *J. Amer. Chem. Soc.* **2010**, *132*(12), 4388-4392. PMID: 20192199 [PubMed - indexed for MEDLINE].

- 21 Chai, Y.; Lee, H. J.; Shaik, A. A.; NKhata, K.; Xing, C.; Zhang, J.; Jeong, S. J.; Kim, S. H.; Lü, J. Penta-O-galloyl-beta-D-glucose induces G1 arrest and DNA replicative S arrest independently of P21Cip1, P27Kip1 and P53 in human breast cancer cells and is orally active against triple negative xenograft growth. *Breast Cancer Research*, **2010**, 12 (R67):1-11. PMID: 20809980 [PubMed - as supplied by publisher].
- 22 Li, L.; Shaik, A. A.; Zhang, J.; Nkhata, K.; Wang, L.; Zhang, Y.; Xing, C.; Kim, S. H.; Lu, J. Preparation of Penta-O-galloyl- β -D-glucose from tannic acid and plasma pharmacokinetic Analyses by Liquid-Liquid Extraction and Reverse-Phase HPLC. *J. Pharmaceut. Biomed.* **2011**, 54: 545-550. PMCID: PMC2981694 [Available on 2012/2/1].
- 23 Srinivasan, B.; Johnson, T. E.; Xing, C.* Chalcone-based inhibitors against hypoxia-inducible factor 1 – Structure activity relationship studies. *Bioorg. Med. Chem. Lett.*, **2011**, 211: 555-558. PMCID: PMC3010284 [Available on 2012/1/1].
- 24 Johnson, T. E.; Hermanson, L. D.; Wang, L.; Kassie, F.; Upadhyaya, P.; O’Sullivan, M. G.; Hecht, S. S.; Lu, J.; Xing, C.* Lung tumorigenesis suppressing effects of a commercial kava extract and its selected compounds in A/J mice. *Amer. J. Chin. Med.*, **2011**, 39(4), 727-742. PMID:21721153 [PubMed - indexed for MEDLINE]
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- 26 Das, S. G.; Srinivasan, B.; Hermanson, D.; Bleeker, N.; Doshi, J. M.; Tang, R.; Beck, W. T.; Xing, C.* Structure Activity Relationship and Molecular Mechanisms of Ethyl 2-Amino-6-(3,5-Dimethoxyphenyl)-4-(2-Ethoxy-2-Oxoethyl)-4H-Chromene-3-Carboxylate (CXL017) and Its Analogue. *J. Med. Chem.* **2011**, 54(16): 5937-5948. PMID: 21780800 [PubMed - indexed for MEDLINE]
- 27 Zhang, J.; Nkhata, K.; Shaik, A. A.; Wang, L.; Li, L.; Zhang, Y.; Higgins, L.; Kim, K. H.; Liao, J. D.; Xing, C.; Kim, S. H.; Lu, J. Mouse prostate proteome changes induced by oral pentagalloylglucose treatment suggest targets for cancer chemoprevention. *Curr. Cancer Drug Targets*, **2011**, 11(7): 787-798. PMID: 21762084.
- 28 Zhang, Y.; Shaik, A. A.; Xing, B.; Chai, Y.; Li, L.; Zhang, J.; Zhang, W.; Kim, S.-H.; Jiang, C.*; Lu, J.* A synthetic decursin analog with increased in vivo stability suppresses androgen receptor signaling in vitro and in vivo. *Investigational Cancer Agents*. **2012**, 30(5), 1820-1829. PMID: 21870073.
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- 30 Shaik, A. A.; Tan, J.; Lu, J.; Xing, C.* Economically viable efficient synthesis of (\pm)-Methysticin - A component in kava potential responsible for its cancer chemopreventive activity. *ARKIVOC* **2012**, viii: 137-145.
- 31 Zhang, J.; Li, L.; Jiang, C.; Xing, C.; Kim, S.-H.; Lu, J. Anti-cancer and Other Bioactivities of Korean *Angelica gigas* Nakai (AGN) and Its Major Pyranocoumarin Compounds. *Anti-Cancer Agents in Medicinal Chemistry* **2012**, 12(10): 1239-1254. PMID: 22583405 [PubMed - as supplied by publisher]

- 32 Triolet, J.; Shaik, A. A.; Gallaher, D. D.; O'Sullivan, M. G.; Xing, C.* Reduction in Colon Cancer Risk by Consumption of Kava or Kava Fractions in Carcinogen-treated Rats. *Nutr. Cancer* **2012**, 64(6): 838-846. PMID: 22693990 [PubMed - in process]
- 33 Aridoss, G.; Zhou, B.; Hermanson, D. L.; Bleeker, N. P.; Xing, C.* Ethyl 2-Amino-6-(3,5-Dimethoxyphenyl)-4-(2-Ethoxy-2-Oxoethyl)-4H-Chromene-3-Carboxylate (CXL017) Structure-Activity Relationship and its Potential to Target Multi-drug Resistance in Cancer Treatment. *J. Med. Chem.* **2012**, 55(11): 5566-5581. PMID: 22582991 [PubMed - indexed for MEDLINE].
- 34 Warmka, J. K.; Solberg, E. L.; Zeliadt, N. A.; Srinivasan, B.; Charlson, A. T.; Xing, C.; Wattenberg, E. V. Inhibition of mitogen activated protein kinases increases the sensitivity of A549 lung cancer cells to the cytotoxicity induced by a kava chalcone analog. *Biochem. Biophys. Res. Comm.* **2012**, 424(3): 488-492. PMID: 22771807 [PubMed - in process].
- 35 Zhang, Y.; Srinivasan, B.; Xing, C.; Lu, J.* A new chalcone derivative (*E*)-3-(4-methoxyphenyl)-2-methyl-1-(3,4,5-trimethoxyphenyl)prop-2-en-1-one suppresses prostate cancer growth involving P53-mediated cell cycle arrests and apoptosis. *Anticancer Res.* **2012**, 32(9): 3689-3698. PMID: 22993307 [PubMed - in process].
- 36 Das, S. G.[#]; Hermanson, D. L.[#]; Bleeker, N.; Lowman, X.; Li, Y.; Kelekar, A.; Xing, C.* Ethyl 2-amino-6-(3,5-dimethoxyphenyl)-4-(2-ethoxy-2-oxoethyl)-4H-chromene-3-carboxylate (CXL017) a novel scaffold that re-sensitizes multidrug resistant leukemia cells to chemotherapy. *ACS Chem. Biol.* **2013**, 8(2): 327-335. PMID: 23102022 [PubMed - as supplied by publisher].
- 37 Li, L.; Zhang, J.; Xing, C.; Kim, S. H.; Lu, J.* Single oral dose pharmacokinetics of decursin, decursinol angelate, and decursinol in rats. *Planta Med.* **2013**, 79(3-4): 275-280.
- 38 Hermanson, D. L.; Li, Y.; Das, S. G.; Xing, C.* Over-expression of Mcl-1 via ERK1/2 mediated stabilization confers cross-resistance while topo II β down-regulation introduces mitoxantrone-specific resistance in acute myeloid leukemia. *Mol. Pharmacol.* **2013**, 84(2): 236-243.
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- 41 Leitzman, P.; Naayanapillai, S. C.; Balbo, S.; Zhou, B.; Shaik, A.; O'Sullivan, M. G.; Upadhyaya, P.; Hecht, S. S.; Lu, J.; Xing, C.* Kava Completely Blocks 4-(Methylnitrosamino)-1-(3-pyridyl)-1-butanone-induced Lung Tumorigenesis via Reducing DNA Damage in A/J Mice. *Cancer Prevention Res.* **2014**, 1(7): 86-96.
- 42 Zhuang, C.; Narayanapillai, S.; Zhang, W.; Sham, Y. Y.* Xing, C.* Rapid Identification of Small Molecule Inhibitors of Keap1-Nrf2 Interaction through Structure-Based Virtual Screening and Hit-Based Similarity Search. *J. Med. Chem.* **2014**, 57(3), 1121-1126.

- 43 Zhuang, C.; Miao, Z.; Wu, Y.; Guo, Z.; Li, J.; Yao, J.; Xing, C.; Sheng, C.; Zhang, W. Double-edged swords as cancer therapeutics: novel orally active small molecules simultaneously inhibit p53-MDM2 interaction and the NF- κ B pathway. *J. Med. Chem.* **2014**, 57(3), 567-577.
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- 45 Ding, J.; Mooers, B.H.; Zhang, Z.; Kale, J.; Falcone, D.; McNichol, J.; Huang, B.; Zhang, X. C.; Xing, C.; Andrews, D. W.; Lin, J. After Embedding in Membranes Bcl-XL Binds Both the BH3 Region and Helix 1 of Bax to Inhibit Apoptotic Mitochondrial Permeabilization. *J. Biol. Chem.* **2014**, 289(17), 11873-11896.
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- pyranocoumarins on two lineages of transgenic adenocarcinoma of mouse prostate carcinogenesis. *Cancer Prev. Res.* **2015**, 8(9): 835-844.
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- 61 Puppala, M.; Zhao, X.; Casemore, D.; Zhou, B.; Aridoss, G.; Narayanapillai, S.C.; Xing, C.* 4H-Chromene-based anticancer agents towards multi-drug resistant HL60/MX2 human leukemia: SAR at the 4th and 6th positions. *Bioorg. Med. Chem.* **2016**, 24(6):1292-1297.
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PUBLICATIONS FROM GRADUATE AND POSTDOCTORAL RESEARCH

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Presentations, Posters, and Exhibits

Invited Presentations at Professional Meetings, Conferences, etc.

1. **Xing, C.** and Skibo, E. B. Sigmatropic reactions of the aziridinyl semiquinone species: Why aziridinyl benzoquinones are metabolically more stable than aziridinyl indoloquinones. American Chemical Society National Meeting, 220th, Washington DC, **2000**.
2. **Xing, C.** Identification of GAPDH as a Protein Target of the Saframycin Class of Natural Antiproliferative Agents, Hormel Research Institute, Austin, MN, **2004**.
3. **Xing, C.** Efforts toward developing Bcl-2 member-selective modulators, University of Minnesota, Department of Chemistry, Chemical Biology Program, Minneapolis, MN, **2004**.
4. **Xing, C.** SARs of HA 14-1: binding interaction with Bcl-2 proteins, cytotoxicity, synergistic effect, and stability, University of Minnesota Cancer Center Chemoprevention Program, Minneapolis, MN, **2005**.
5. **Xing, C.** Development of selective antagonist for anti-apoptotic Bcl-2 proteins. Engebretson Symposium on Drug Discovery and Development in Cancer Experimental Therapeutics, Minneapolis, MN, **2005**.
6. **Xing, C.** and Johnson, T. Kava as a chemopreventive agent, Complimentary and Integrative Medicine Seminar, Mayo Clinic, Rochester, MN, **2006**.
7. **Xing, C.** and Wang, L. Bcl-2 antagonists for prostate cancer treatment. Prostate Cancer Research Seminar, University of Minnesota, MN **2006**.
8. Wang, L., Tang, X., and **Xing, C.** Efforts toward developing Bcl-2 member-selective modulators through solid-phase approach, International Symposium on Chemical Biology and Combinatorial Chemistry, Jinan, China, **2006**.
9. **Xing, C.**; Tian, D.; Addo, S. N.; Doshi, J. M. Why can HA 14-1, an antagonist against Bcl-2, synergize a variety of standard chemotherapies? AACR-ACS Joint Conference Chemistry in Cancer Research: A Vital Partnership, San Diego, CA, **2007**.
10. Johnson, T. E., **Xing, C.** Kava – is it a source of chemopreventive/chemotherapeutic agents against pancreatic cancer? PanCAN symposium, Pancreatic SPORE Program, University of Minnesota, MN **2007**.
11. **Xing, C.**, Doshi, J., Tian, D., Addo, S., and Das, S. sHA 14-1 selectively targets drug-resistant cancer cells in human leukemia cells through the induction of ER Ca²⁺ release, Hormel Research Institute, Austin, MN **2007**.
12. **Xing, C.**, Johnson, T. E., Kassie, F., and Hecht, S. S. Can kava be a chemopreventive agent? Engebretson Symposium on Drug Discovery and Development in Cancer Experimental Therapeutics, Minneapolis, MN, **2007**.

13. **Xing, C.** Studies of small-molecule antagonists against anti-apoptotic Bcl-2 proteins, synthesis, mechanism of action, and anticancer activity. St. Cloud State University, MN, **2007**.
14. **Xing, C.** Studies of HA 14-1, can we selectively target ER-specific Bcl-2 proteins? Center for Drug Design, University of Minnesota, MN, **2007**.
15. **Xing, C.** Identification of chemopreventive agents against lung tumorigenesis. Minnesota Chemoprevention Consortium, Waseca, MN, **2008**.
16. **Xing, C.** Development of Bcl-2 antagonists toward drug-resistant cancers. Department of Biochemistry & Molecular Biology, The University of Oklahoma, Oklahoma City, OK, **2008**.
17. **Xing, C.** Bcl-2 proteins, calcium regulation, and apoptosis – a view from sHA 14-1, a small-molecule antagonist. Department of Chemistry, National University of Singapore, Singapore, **2008**.
18. **Xing, C.** Developing chemopreventive agents from natural sources – studies of kava. Department of Chemistry, Nanyang Technological University, Singapore, **2008**.
19. **Xing, C.** Studies of kava and chalcone-based flavokawains as potential chemopreventive agents, Department of Medicinal Chemistry, Shandong University, Jinan, China, **2008**.
20. **Xing, C.** Studies of sHA 14-1, a stable and ROS-free Bcl-2 antagonist, for its regulation of calcium and apoptosis. Department of Chemistry, Vanderbilt University, Nashville, TN, **2008**.
21. **Xing, C.** Kava as a chemopreventive agent against lung cancer. International Lung Cancer Conference, Liverpool, England, **2008**.
22. **Xing, C.** Johnson, T. E. Developing kava and flavokawains as chemopreventive agents, Ferulate'08 – an international conference on hydroxycinnamates and related plant phenolics, St. Paul, MN **2008**.
23. **Xing, C.** Studies of kava and chalcone-based flavokawains as potential chemopreventive agents, Department of Medicinal Chemistry, University of North Carolina, Chapel Hill, NC **2008**.
24. **Xing, C.** Dual mechanism of sHA 14-1 in eliminating cancer cells. Department of Chemistry and Biochemistry, University of Minnesota Duluth, Duluth, MN **2008**.
25. **Wang, J., Xing, C.** Biomarkers identification and detection based on GMR sensor and sub 13 nm magnetic nanoparticles, 31st Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Minneapolis, MN **2009**, #2266.
26. **Srinivasan, B.; Li, Y.; Jing, Y.; Xu, Y.; Wang, J. P.,* Xing, C.*** A GMR sensor- and magnetic nanoparticle-based detecting system of zeptomol sensitivity: An integrated platform potentially leading to personalized medicine. ACS 238th National Meeting, Washington DC, **2009**, MEDI-124.
27. **Xing, C.** Interdisciplinary research in disease early detection, prevention, and treatment - cancer as a model system. Powell Woman Institute – BIRWCH seminar. University of Minnesota, Minneapolis, MN Feb. 10, **2010**.
28. **Xing, C.** Preventing tobacco carcinogen-induced lung tumorigenesis in A/J Mice by kava, its safety, potential mechanisms of action, and active constituents. Masonic Cancer Center Cancer Prevention & Control Seminar. University of Minnesota, MN Oct. **2010**.

29. **Xing, C.** An anticancer candidate selective against drug resistant leukemia. Masonic Cancer Center. Leukemia Research Seminar. University of Minnesota, MN Nov. **2010**.
30. **Xing, C.** An anticancer candidate selective against drug resistant leukemia and its mechanism of action. Masonic Cancer Center Research Symposium. University of Minnesota, MN May. **2011**.
31. **Xing, C.** Selectively targeting drug resistant cancer cells. Shandong University, Dept. of Medicinal Chemistry, Jinan, July, **2011**.
32. **Das, S.;** Xing, C. Synthesis of anticancer agents that selectively target drug resistant cancer, ACS national meeting – Spring 2011, March, **2011**.
33. **Xing, C.** CXL candidates targeting unique pathways to prevent/overcome drug resistance in cancer therapy. Dalian Medical University, Dalian, August, **2012**.
34. **Xing, C.** The therapeutic potential of kava, its active constituents and mechanism of action. Lovelace Respiratory Research Institute, Albuquerque NM Sept. 21st **2012**.
35. **Xing, C.** An Anticancer Drug Candidate against Drug Resistance in Leukemia and its Mechanisms of Action. Western Canadian Medicinal Chemistry Workshop, Saskatoon, SK S7N 5C9, Sept.29th **2012**.
36. **Xing, C.** Anticancer agents selectively targeting drug resistant malignancies and mechanisms of action, Lovelace Research Institute, New Mexico, NM **2013**.
37. **Xing, C.** Anticancer agents selectively targeting drug resistant malignancies and mechanisms of action, ACS national meeting – Spring 2013, New Orleans, LA **2013**.
38. **Xing, C.** Kava - its resurgence, quality control, anxiolytic activity, and hepatotoxic risk, a natural medicine with future promise and challenges, 12th Annual Oxford International Conference on the Science of Botanicals. April 2014, Oxford, MI **2013**.
39. **Xing, C.** Interdisciplinary research in cancer treatment, prevention, and early detection. University of California San Diego Department of Medicinal Chemistry, July 1, **2013**.
40. **Zhang, J.** Xing, C., and Lu, J. Subchronic Toxicological Evaluation of Ethanol Extract of Korean Medicinal Herb Angelica Gigas Nakai and its Pyranocoumarin Tissue Distribution in Mice. The 2013 AAPS Annual Meeting, Nov. 2013, San Antonio, TX **2013**.
41. **Xing, C.** Medicinal chemistry effort in cancer treatment, prevention, and early detection. University of Minnesota Masonic Cancer Center, Minneapolis, MN, Feb. 4, **2014**.
42. **Xing, C.** U of M research finds kava plant may prevent cigarette smoke-induced lung cancer. University of Minnesota Research Animal Resources, Minneapolis, MN, Feb. 7, **2014**.
43. **Xing, C.** Interdisciplinary research to address challenges on kava – its beneficial effects and potential adverse effects. International Conference on Applied Chemistry, March 5-7, 2014, Fiji **2014**.
44. **Xing, C.** Medicinal chemistry effort in cancer treatment, prevention, and early detection. International Conference on Applied Chemistry, March 10, 2014, Division of Natural Sciences and Mathematics, Chaminade University of Honolulu **2014**.
45. **Xing, C.** Kava as a lung cancer chemopreventive agent and its hepatotoxic risk. Hawaii kava/ava Association seminar, March 11th, Hilo Hawaii **2014**.

46. **Xing, C.** I Medicinal chemistry effort in cancer treatment, prevention, and early detection. International Conference on Applied Chemistry, March 11, College of Pharmacy University of Hawaii **2014**.
47. **Xing, C.** Systematic analyses of kava's hepatotoxic risk – what do we know and what we do not know. The 2014 Society of Toxicology National Meeting, March 23-27, 2014, Phoenix, AZ **2014**.
48. **Xing, C.** What do we know about kava as a dietary supplement – its potential benefit and risks. 13th Annual Oxford International Conference on the Science of Botanicals. April 16-18, Oxford, MI **2014**.
49. **Xing, C.** An anticancer candidate targeting drug resistance in leukemia and its mechanism of actions, June 4th, The Second Military University, Shanghai, China **2014**.
50. **Xing, C.** Chalcone-based compounds - their potential as probes and drug lead templates, June 5th, Northeastern Institute of Technology, Shanghai, China **2014**.
51. **Xing, C.** Medicinal chemistry effort in cancer treatment, prevention, and early detection. June 15th, Dalian University of Technology, Panjin, China **2014**.
52. **Xing, C.** Dihydropyridone (DHP) potently blocks tobacco carcinogen 4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone (NNK)-induced lung tumorigenesis and differentially reduces DNA damage in A/J mice. Structural biology and biochemistry program seminar. University of Colorado Anschutz Medical Campus, Nov. 12th, Denver, CO **2014**.
53. **Xing, C.** Progress of kava lung cancer chemoprevention, MC2 meeting, April 15th, Rochester, MN **2015**.
54. **Xing, C.** An Anticancer Candidate Selectively Targeting Multidrug-resistant Leukemia and Mechanistic Investigation. University of Arkansas for Medical Sciences, June 15th, Little Rock, AR **2015**.
55. **Xing, C.** Kava's cancer preventive potential and hepatotoxic risk – what do we know and what shall we do? July 27, Hawaii Kava Symposium, Honolulu, HA **2015**.
56. **Xing, C.** Interdisciplinary research in cancer treatment, prevention and early detection. Jan. 11, Department of Pharmaceutical Science, Washington State University, Spokane, WA **2016**.
57. **Xing, C.** Medicinal chemistry in cancer treatment, prevention and early detection. Jan. 14, Department of Medicinal Chemistry, University of Florida, Gainesville, FL **2016**.
58. **Xing, C.** Cancer prevention – opportunities and challenges and a case study. University of Minnesota Medical School, Minneapolis, MN **2016**.
59. **Xing, C.** Cancer prevention – opportunities and challenges and a case study. Chinese 2nd Military University, Shanghai, China, **2016**.
60. **Xing, C.** Medicinal chemistry in cancer treatment, prevention, and early detection. Dalian University of Technology, Dalian, China, **2016**.
61. **Xing, C.** Medicinal chemistry in cancer treatment, prevention and early detection. Sept. 3, The 7th Symposium of Science, Engineering & Biomedicine, Jacksonville, FL, **2016**.
62. **Xing, C.** Kava – what do we know and what shall we do? Department of Epidemiology, University of Florida, Gainesville, FL, **2016**.

63. **Xing, C.** Medicinal chemistry in cancer treatment, prevention, early detection and related biology, Department of Chemistry, University of Florida, Gainesville, FL, **2017**.
64. **Xing, C.** Developing novel agents to treat drug resistant malignancies 016 FACCA Research Retreat, Orlando, FL, **2017**.
65. **Xing, C.** Kava and cancer prevention. Chemistry Club, University of Florida, Gainesville, FL, **2017**.
66. **Xing, C.** Dihydromethysticin (DHM) and flavokawains, separating kava's lung cancer chemopreventive activity and hepatotoxic risk and the *in vivo* SAR of DHM. College of Pharmacy, Ningxia Medical University, Ninxia, P.R. China, **2017**.
67. **Xing, C.** A journey from the literature, to the bench, to the clinic and...UF Drug Discovery CNPD3 symposium, Gainesville, FL, **2017**.
68. **Xing, C.** A dietary supplement kava to reduce tobacco use, reduce carcinogenesis risk, and improve the quality of life among head and neck cancer survivor smokers. Tobacco control group tobacco pilot presentation, Gainesville, FL, **2018**.
69. **Xing, C.** Targeting MDR malignancies and exploring cancer prevention, UF Cancer Center, Gainesville, FL **2018**.
70. **Xing, C.** Rejuvenating an old folk medicine – kava. The 8th Symposium of Science, Engineering & Biomedicine & The 4th Symposium of Humanities and Social Science, Stillwater, FL **2018**.
71. **Xing, C.** A journey from the literature to the bench and to the clinic – kava. Departmental Seminar for Physiological Sciences, University of Florida, Gainesville, FL. **02/26/2019**.
72. **Xing, C.** The potential of kava, an old folk medicine, in mitigating tobacco use, associated lung carcinogenesis risk and ? The 21st Annual International Meakins-Christie Laboratories Workshop. McGill University, Montreal, Canada. **03/25/2019**.

Posters or Exhibitions

1. Doshi, J. M.; **Xing, C.** Developing small molecules to overcome drug resistance induced by Bcl-XL. University of Minnesota NIH Training Grant Symposium, Minneapolis, MN, **2005**.
2. Wang, L.; Tang, X.; **Xing, C.** Effort toward developing Bcl-2 member-selective modulators through solid-phase based approach. University of Minnesota NIH Training Grant Symposium, Minneapolis, MN, **2005**.
3. Doshi, J. M.; **Xing, C.** Developing small molecules to overcome drug resistance induced by Bcl-XL. Engebretson Symposium on Drug Discovery and Development in Cancer Experimental Therapeutics, Minneapolis, MN, **2005**.
4. Wang, L.; Tang, X.; **Xing, C.** Effort toward developing Bcl-2 member-selective modulators through solid-phase based approach. Engebretson Symposium on Drug Discovery and Development in Cancer Experimental Therapeutics, Minneapolis, MN, **2005**.
5. **Xing, C.**; Tian, D.; Doshi, J. Apoptotic pathway induced by HA 14-1, a small-molecule antagonist for Bcl-2 protein, 232nd ACS National Meeting, San Francisco, CA, **2006**, MEDI-095.

6. Tian, D.; Doshi, J. M.; Addo, S. N.; **Xing, C.** HA 14-1 induced apoptosis in Jurkat cells – the potential mechanism for its synergism to a variety of chemotherapies, International Symposium on Chemical Biology and Combinatorial Chemistry, Jinan, China, **2006**, #41.
7. **Xing, C.**; Doshi, J. M. Identification of a novel small molecule antagonist of anti-apoptotic Bcl-2 proteins: Bcl-2 protein binding, *in vitro* cytotoxicity, and synergism, 233rd ACS National Meeting, Chicago, IL, **2007**, MEDI-094.
8. **Xing, C.**; Doshi, J. M. Studies on the stability of HA 14-1, a small molecule antagonist for anti-apoptotic Bcl-2 protein. 233rd ACS National Meeting, Chicago, IL, **2007**, MEDI-449.
9. Tian, D.; Addo, S. N.; Doshi, J. M.; **Xing, C.** Apoptotic pathways induced by HA 14-1, an antagonist of Bcl-2 protein, in Jurkat cells. AACR-ACS Joint Conference Chemistry in Cancer Research: A Vital Partnership, San Diego, CA, **2007**.
10. Doshi, J. M.; **Xing, C.** Studies on the stability of HA 14-1 – a small molecule antagonist for anti-apoptotic Bcl-2 protein, AACR Annual Meeting, Los Angeles, CA, **2007**, #3976.
11. Beishir, S.; **Xing, C.**; Kuriyama, R. Are anti-apoptotic Bcl-2 family proteins involved in cell division? The American Society For Cell Biology 47th Annual Meeting, Washington, DC, **2007**.
12. Johnson, J. E.; Kassie, F.; Upadhyaya, P.; Hecht, S. S.; **Xing, C.** Chemopreventive effect of kava on 4-(Methylnitrosamino)-1-(3-pyridyl)-1-butanone plus Benzo(a)pyrene-induced lung tumorigenesis in A/J mouse. 6th Annual AACR International Conference Frontiers in Cancer Prevention Research, Philadelphia, PA, **2007**, B141.
13. **Xing, C.**; Johnson, J. E.; Kassie, F.; Upadhyaya, P.; Hecht, S. S. Chemoprevention of kava and its potential active components against lung tumorigenesis in A/J mouse induced by 4-(Methylnitrosamino)-1-(3-pyridyl)-1-butanone and Benzo(a)pyrene. Cancer Prevention 2008 – 5th International Conference, St. Gallen, Switzerland, **2008**, #39.
14. **Xing, C.**; Wang, L., Sloper, D.; Addo, S. N.; Tian, D.; Slaton, J. WL-276, an antagonist against anti-apoptotic Bcl-2 proteins, overcome drug resistance and suppresses prostate tumor growth. AACR national meeting 2008, San Diego, CA, **2008**, #3200.
15. **Xing, C.**; Addo, N. S.; Doshi, J. M. sHA 14-1 selectively targets drug-resistant human leukemia cancer cells through the induction of ER Ca²⁺ release, independent of mitochondria-mediated apoptotic pathway. AACR national meeting 2008, San Diego, CA, **2008**, #4751.
16. Li, Y.; Srinivasan, B.; Jing, Y.; Yao, X.; Xu, Y.; Zhang, Q.; **Xing, C.**; Wang, J. P. Magnetic biosensor for screening small molecular ligands against protein target. Scientific and Clinical Applications of Magnetic Carriers – 7th International Conference, Vancouver, Canada, **2008**, #224.
17. Johnson, T. E.; Hugger, M.; **Xing, C.** Synthesis and evaluation of chalcones, privileged chemopreventive structures. ACS 236th National Meeting, Philadelphia, PA, **2008**, MEDI-123.
18. Johnson, T. E.; Kassie, F.; Upadhyaya, P.; Hecht, S.; **Xing, C.** Flavokawains A and B: chemopreventive constituents of kava against lung tumorigenesis. ACS 236th National Meeting, Philadelphia, PA, **2008**, MEDI-124.
19. Li, Y.; Jing, Y.; Yao, X.; Srinivasan, B.; Xing, C.; Wang, J. Biomarkers identification and detection based on GMR sensor and sub 13 nm magnetic nanoparticles. The 31st

- Annual International IEEE EMBS Conference of the IEEE Engineering in Medicine and Biology Society, Minneapolis, MN, **2009**, #2266.
20. Xing, C. Kava as a lung cancer chemopreventive agent. 8th annual AACR International Conference – Frontiers in Cancer Prevention Research 2009, Houston TX, **2009**, #294.
 21. Zhang, J.; Shaik, A.; Nhkata, K.; Wang, L.; Kim, K. H.; Liao, J. D.; Xing, C.; Kim, S. H.; Lü, J. Proteome changes in mouse prostate induced by oral administration of penta-O-galloyl-beta-D-glucose suggest targets for cancer chemoprevention. AACR national meeting 2010, Washington, DC, **2010**.
 22. Li, L.; Zhang, J.; Shaik, A.; Nhkata, K.; Xing, C.; Lu, J. Pharmacokinetics studies of anti-cancer gallotannin penta-O-galloyl-beta-D-glucose (PGG) in mice. AACR national meeting 2010, Washington, DC, **2010**.
 23. Chai, Y.; Lee, H. J.; Shaik, A.; Nhkata, K.; Xing, C.; Kim, S. H.; Lu, J. Penta-O-galloyl-beta-D-glucose induces DNA replicative S arrest and G₁ arrest independent of p21Cip1, p27Kip1 and p53 in human breast cancer cells and is orally active against breast cancer xenograft. AACR national meeting 2010, Washington, DC, **2010**.
 24. Xing, C.; Gallaher, D.; O’Sullivan M. G. Does Kava Reduce Colon Cancer Risk? Healthy Food Healthy Life Symposium – 2010, Saint Paul, MN, **2010**.
 25. Das, S.; Hermanson, D.; Xing, C. Selectively targeting drug resistant cancer cells. Gordon Conference, **2011**.
 26. Das, S.; Hermanson, D.; Xing, C. CXL017 re-sensitizes multidrug resistant leukemia cells to chemotherapy via modulating Bcl-2 family proteins and SERCA proteins, AACR Annual Meeting, **2012**, Chicago, IL, #767.
 27. He, W.; Wang, Q.; Srinivasan, B.; Xu, X.; Chen, W.; Padilla, M.; Gou, X.; Xing, C.; Lin, Y. Autophagy-associated necroptosis contributes to cancer cell cytotoxicity induced by the chalcone compound SBC2. AACR Annual Meeting, **2012**, Chicago, IL, #2277.
 28. Li, L.; Zhang, J.; Xing, C.; Jiang, C.; Kim, S-H.; Zhang, R.; Lu, J. in vitro metabolism studies of herbal compound decursin and decursinol angelate in rodent and human liver microsomes. ASMS **2012**, #1375.
 29. Wattenberg, E. V.; Warmka, J. K.; Srinivasan, B.; Xing, C. A kava chalcone analogue inhibits A549 lung cancer cell proliferation through a pathway modulated by mitogen activated protein kinases. The 51st SOT Annual Meeting, **2012**, #2850.
 30. Xing, C., Hermanson, D.; Aridoss, G.; Das, S. Mechanisms of multidrug resistance in AMLs and selective targeting via small molecules. AACR Molecularly Targeted Therapies – Mechanisms of Drug Resistance Meeting, **2012**, San Diego, B39.
 31. Aridoss, G.; Zhou, B.; Hermanson, D. L.; Bleeker, N. P.; Xing, C. Ethyl 2-Amino-6-(3,5-Dimethoxyphenyl)-4-(2-Ethoxy-2-Oxoethyl)-4H-Chromene-3-Carboxylate (CXL017) Structure-Activity Relationship and its Potential to Target Multi-drug Resistance in Cancer Treatment, **2012**, St. Paul, 5th CBI symposium.
 32. Bleeker, N. P.; Miller, T.; Hermanson, D. L.; Das, S. G.; Thomas, D. D.; Xing, C. Small molecule inhibitors of the sarco/endoplasmic reticulum Ca²⁺-ATPase as novel leads in the treatment of drug resistant leukemia, **2012**, St. Paul, 5th CBI symposium.
 33. Xing, C., Hermanson, D.; Aridoss, G.; Das, S. Mechanisms of multidrug resistance in AMLs and selective targeting via small molecules. 2nd Masonic Cancer Center Symposium, 2012, Minneapolis.

34. Linda B. von Weymarn, Pablo Leitzman, Xingxin Yu, Chengguo Xing, Sharon E. Murphy. Kavalactones, inhibitors of NNK tumorigenesis and coumarin metabolism in A/J mice. The 18th International Conference on Cytochrome P450 Biochemistry, Biophysics and Structure June 18-22, **2013**, Seattle, Washington USA.
35. Zhang, W.; Xing, C.; Arndt, P. Kava-derived compounds suppress the acute inflammatory response in human neutrophils. B39. **2013**, Pennsylvania, USA
36. Zhang, J.; Li, L.; Hale, T. W.; Chee, W.; Xing, C.; Jiang, C.; Lu, J. Single oral dose pharmacokinetics of cancer chemopreventive pyranocoumarins from *Angelica gigas* Nakai in men and women. The 105th AACR national meeting, **2014**, April 5 – 9. San Diego, CA.
37. Tang, S. N.; Datta, P.; Leitzman, P.; Xing, C.; Srivastava, S.; Jiang, C.; Lu, J. Suppressing effect of a kava fraction on two lineages of prostate carcinogenesis in the transgenic adenocarcinoma of mouse prostate model. The 105th AACR national meeting, 2014, April 5 – 9. San Diego, CA.
38. Wu, W.; Puppala, M.; Tang, S.; Zhang, J.; Xing, C.; Jiang, C.; Lu, J. Equi-molarity vs. pharmacokinetics-guided dosing in anti-cancer efficacy assessment of precursor-product pairs: Example with pyranocoumarins from Korean *Angelica*. The 106th AACR national meeting, 2015, April 18 – 22. Philadelphia, PA
39. Xing, C.; Wang, Y.; Narayanapillai, S.; Naomi, F. Potential of Kava in Reducing Lung Cancer Risk, Tobacco Use, and Associated Disparities. The 110th AACR national meeting, 2019, March 29 – April 3. Atlantic

Other Key Activities and Accomplishments

Patents

1. Myers, A.; Plowright, A. T.; Kung, D. W.; Lanman, B.; Barbay, J. and **Xing, C.** Preparation of saframycin analogs for pharmaceutical use in the treatment of cancer. PCT Int. Appl. **2002**, WO 2002040477.
2. Skibo, E. B. and **Xing, C.** Recognition and cleavage at the DNA major groove. U.S. Pat. Appl. Publ. **2003**, US 2003119022.
3. Skibo, E. B. and **Xing, C.** Aziridinyl Quinone Antitumor Agents Based on Indoles and Cyclopent[b]indoles: Structure-Activity Relationships for Cytotoxicity and Antitumor Activity. U.S. Pat. Appl. Publ. **2003**, US 2003139609.
4. Skibo, E. B. and **Xing, C.** Preparation of N-unsubstituted cytotoxic (aziridinyl)indolediones and (aziridinyl)cyclopent(b)indolediones for the treatment of cancer. U.S. Pat. Appl. Publ. **2004**, US 20040006054.
5. Myers, A.; LaPorte, J.; **Xing, C.** Assay for identifying biological targets of polynucleotide-binding compounds. U.S. Appl. Publ. **2004**, US 2004248100.
6. **Xing, C.**; Doshi, J. M. Therapeutic compounds, U. S. Patent, **2009**, US2008057892.
7. **Xing, C.** Therapeutic compounds, U. S. Patent, **2009**, US2008084409
8. **Xing, C.** and Wang, J. Nanosensor, U.S. Patent, **2009**.
9. **Xing, C.** et al. Kava therapeutics and their use, U.S. provisional patent, **2013**.
10. **Xing, C.** et al. KAVA EXTRACTS, ISOLATED KAVALACTONES, AND USES IN TREATING TOBACCO AND NICOTINE ADDICTION. PCT/US2018/047879. **2019**.

TEACHING AND CURRICULUM DEVELOPMENT

Courses, seminars, and instructional units taught

1. Drug Design (PHA6936), 2018 - 2019, 8 lecture hours.
2. Drug Design (PHA6447), 2017 - 2019, 4 lecture hours, 15 students.
3. Introduction to Graduate Skills (PHA6894), 2017 – 2019, 2 lecture hours.
4. Introduction to drug discovery (PHA6935), 2017 – 2019, 1 lecture hours.
5. Department Seminar (PHA6447), 2017, 30 lecture hours.
6. Patient Care 7 (PHA5080), 2018, 4 lecture hours, 300 students
7. Patient Care 4 (PHA5784), 2017 – 2019, 9 lecture hours, 300 students.
8. Medicinal Agent I (Phar 6154, Principles of Drug Action), 2004-2009, 12 lecture hours per year, 110 students.
9. *Medicinal Agent III (Phar 6156, Anticancer Agents)*, 2005-2016, 16 lecture hours per year, 110 students.
10. Principles of Medicinal Chemistry (MedC 5700, DNA and related therapies and physicochemical properties of drugs), 2005, 2007, and 2009, 11 - 15 lecture hours every year, 6 – 10 students.
11. Vistas in Medicinal Chemistry Research, (MedC 5495), 2003-2016, 1 lecture hour per year, 10 students.
12. Principles of Medicinal Chemistry (MedC 8002, DNA and related therapeutics), 2011, 2103, and 2014, 12 lectures each year, 10 students.
13. Principles of Medicinal Chemistry (MedC 8001, SAR of nucleosides), 2014, 2 lecture hours each year, 10 students.
14. Summer Journal Club, 2005 – 2007, organizing the journal club, 10 hours per year, 60 attendants.
15. Design of Chemotherapeutic Agents (MedC 8500), Fall, 2011 and 2013, 18 lecture hours per year.
16. Natural Medicine (Phar , kava pharmacokinetics and pharmacodynamics), 2014, 1 lecture hour per year.

Curriculum Development

1. Drug Design (PHA6936), 2018, developing the graduate course, 42 lecture hours per semester, 15 students.
2. Summer Journal Club, 2005 – 2007, organizing the journal club, 10 hours per year, 60 attendants
3. Design of Chemotherapeutic Agents (MedC 8500), Fall, 2011, and 2013, 28 lecture hours per year.

Faculty Development Activities regarding teaching

Workshop with the Center for Teaching and Learning for the Early Career Teaching Programs, 2007

ADVISING AND MENTORING

High School Student Activities

Ryan Johnston (SSTP)

June 2017 – July 2017

Undergraduate Student Activities

Undergraduate research projects (UROPS, directed research, lab participation, etc.)

Fansen Kong	Feb. 2004 – June, 2006
Midhasso Hama Foge	Jan. 2007 – July, 2007
Debela Gameda	May 2007 – Dec. 2007
Mariam Warsame	Sept. 2007 – Dec. 2007
Maryan Mohammed	Sept. 2007 – Dec. 2007
Asmeret Tesfahun	Sept. 2007 – May 2008
Marie A. Hugger	July 2007 – July 2009
Jonathan Tan Jian Yong	Jan. 2010 – Dec. 2010
Bei Li	Jan. 2010 – Aug. 2010
Hyojin Lee	Sept. 2010 – May. 2011
Evan Hendrickson	Jan. 2011 – May 2011
Matthew Guan	May 2011 – Sept. 2011
Hayat Hassen	July 2011 – Sept 2012
Pablo Leitzmen	Jan. 2011 – July 2012
Julie Lao	May 2014 – Sept. 2014
Mary O’Sullivan	May 2014 – Sept. 2015
Da Yeon Lee	July 2014 – 2016
Haini Zhang	August 2014 – August 2015
Philip Leung	Jan 2015 – 2016
Gregory Mannino	August 2015 – 2016
Vickie Nguyen	March 2017 – May 2018
Nikhita Yadlapalli	March 2017 – May 2018
Krishna Bhakta	March 2017 – May 2018
Charles Soukup	May 2017 – May 2018
Justin Farley	May 2017 – Dec. 2017
Janel Aslan	May 2017 – July 2018
Jordy Botello	May 2017 – present
Pedro Coral	May 2017 – present
Neffie	June 2019 – present
Mathew	June 2019 – present

Graduate Student Activities

Master’s Theses Directed

Sadiya N. Addo

Fall 2005 – Spring 2008 (Graduated)

Thesis title: Mechanistic studies of small-molecule antagonists of anti-apoptotic Bcl-2 proteins.

Thomas E. Johnson

Fall 2005 – Fall 2008 (Graduated)

Thesis title: Design, synthesis, and biological evaluation of potential chemopreventive agents against lung tumorigenesis.

Nicholas Bleeker Fall 2010 – Spring 2013 (Graduated)
Thesis topic: Advancing a novel chemotype for the treatment of multidrug-resistant cancer.

Denise Casemore Fall 2013 – present
Thesis topic: SERCA and CXL candidates in multi-drug resistance

Master's Student Advisees

Shui Li 2012 – 2013
Dan Wang 2011 – 2013

Doctoral Dissertations Directed

Jignesh M. Doshi Fall 2003 – Spring 2008 (Graduated)
Thesis title: Rational design, syntheses, and biological evaluation of antagonists against anti-apoptotic Bcl-2 proteins.

Sonia Das Fall 2006 – Fall 2011 (Graduated)
Thesis title: Development of effective anti-cancer agents targeting drug-resistant malignancies

David Hermanson Fall 2007 – Fall 2012 (Graduated)
Thesis topic: Mechanisms of CXL017: targeting drug resistant cancer.

Bo Zhou Fall 2010 – 2016
Thesis topic: Kava, its efficacy against various diseases, its safety, active constituents, and mechanism of action

Qi Hu Fall 2017 – present
Thesis topic: Dihydromethysticin and its chemopreventive structure-activity relationships

Doctoral Students Advised (Academic advising for all or part of graduate student's program)

Li Liu 2004 – 2009
Brian White 2005 – 2010
Jin Zhou 2006 – 2011
Sanna Bardaweel 2007 – 2011
Rahul Lad 2007 – 2011
Kwon Ho Hong 2007 – 2013
Cece Martin (plant biological sciences) 2010 – 2015
Li-Kai Liu 2011 – 2016
Nick Struntz 2011 – 2016
Adam Zarth 2013 – 2016
Aniekan M. Okon 2013 – 2016
Chang Liu 2013 – 2016
Kimberly M. Maize 2013 – 2016
Emily Boldry 2014 – 2016
Trent West 2014 – 2016
Jake Peterson 2014 – 2016

Doctoral Committees Served on

Dorian Nelson	2005 – 2006
Mathew Grandois	2005 – 2006
Daniel Wherritt	2005 – 2006
Enver Cagri Izgu	2007 – 2008
Giang Hoang	2008 – 2012
Feng Shao	2009 – 2010
Zhongda Pan	2011 – 2012
Andrew Michel	2012 – 2013

Professional Student Activities

Professional students supervised

Pharm. D Research

Becky Gnan	Dec. 2005 – June, 2006
Mariam Somji	Feb. 2007 – Aug. 2007
Marie Hugger	April 2008 – June 2009
Joshua McBride	April 2017 – June 2017

Pharm. D Paper

Michelle Borchart	Spring 2005 – Fall 2005
Jessica R. Kaeser	Spring 2006 – Fall 2006
Becky Gnan	Spring 2006 – Fall 2006
Minh Ha	Spring 2006 – Fall 2006
Angela Schlagel	Spring 2007 – Fall 2007
Heather Stubbe	Spring 2007 – Fall 2007
Mariam Somji	Spring 2007 – Fall 2007
Robert Kinyua	Spring 2008 – Fall 2008
Robert Kin	Spring 2009 – Fall 2009
Katie Kline	Spring 2009 – Fall 2009
Sean Kenny	Spring 2010 – Fall 2011
Marie A. Hugger	Spring 2010 – Fall 2011
Kathy Olson	Spring 2010 – Fall 2011
Natasha Thoner	Spring 2010 – Fall 2011
Shelleaha Nippoldt	Spring 2011 – Fall 2011
Karen McEiver	Spring 2012 – Fall 2012
Megan Nimke	Spring 2012 – Fall 2012
Quang-Think P. Cao	Fall 2012 – Spring 2013
Maureen Reilly	Fall 2012 – Spring 2013
Christina Yi	Fall 2012 – Spring 2013
Aimee Rosin	Fall 2012 – Spring 2013

Post-doctoral fellows and visiting scholars supervised

XiaoHu Tang	August 2003 – Feb. 2005
Research topic: developing methods to identify protein-specific modulator	
Liangyou Wang	Dec. 2004 – May, 2007
Research topic: developing methods to identify protein-specific modulator and synthesizing lead compounds	
Defeng Tian	March 2005 – Sept. 2007
Research topic: elucidating the mechanism of action of small-molecule Bcl-2 antagonists	
Balasubramanian Srinivasan	August 2007 – April 2011

	Research topic: developing GMR sensor- and nanoparticle-based detection system for early cancer detection.	
Ahmad Ali Shaik		Sept. 2008 – Dec. 2011
	Research topic: synthesizing stabilized decurcinol analogs for anticancer evaluation.	
Jinling Zhang		Jan. 2011 – Dec. 2011
	Research topic: evaluating the in vivo efficacy of various candidates.	
Aridoss Gopalakrishnan		August 2011 – July 2012
	Research topic: synthesizing small molecule candidates against drug resistant leukemia.	
Yunfang Li		May 2012 – July 2012
	Research topic: elucidating the mechanisms responsible for CXL's selective anticancer potential against drug resistant malignancies.	
Xingxin Yu		August 2012 – Present
	Research topic: developing DYRK2 inhibitors and chemical probes for biological investigation and disease treatment/prevention.	
Xin Huang		July 2012 – Dec. 2012
	Research topic: characterizing the mechanism of action of various kava chemicals in vitro and evaluating the efficacy of CXL compounds against drug resistance/stem cells in AML.	
Manohar Puppala		Feb. 2012 – Feb. 2014
	Research topic: synthesizing CXL compounds, natural products, and peptides.	
Shang-Husan Lin		Oct. 2015 – July 2017
	Research topic: characterizing the interaction of kavalactones with the AHR pathway.	
Haifeng Sun		Oct. 2015 – March 2017
	Research topic: rational design and synthesis of CXL compounds based on the x-ray structure and pharmacokinetic analysis of CXL055.	
Kavitha Chandajirikippal		Oct. 2016 – Oct. 2017
	Research topic: mechanistic investigation of CXL compounds for their selective cytotoxicity towards drug resistant cancers.	
Yi Wang		Oct. 2016 – August 2018
	Research topic: investigating the impact of kava on human benefit via LC-MS/MS based analysis	
Sreekanth Narayanapillai		Jan. 2013 – Dec. 2018
	Research topic: investigating the in vivo efficacy and mechanisms of various natural and synthetic organic molecules	
Tengfei Bian		April. 2017 – present
	Research topic: investigate calcium regulation by SERCA and other proteins in GUV and in intact cells.	
Santanu Hati		July 2017 – August 2018
	Research topic: structure-activity relationships of kavalactones on NNK-induced lung tumorigenesis	
Youngeng Wu		March 2018 – May 2019
	Research topic: stress and cancer development in cell cultures and kava perturbation	

Other Mentoring Activities [including serving as a mentor or member of a mentoring committee for a faculty member, etc.]

Rotation advisor

Li Liu	09/05/2003 - 11/09/2003
Brian White	11/10/2003 - 01/15/2003
Jignesh Doshi	11/10/2003 – 01/15/2003
Liaodan Liu	11/10/2004 - 01/15/2004

Leon Goeden	11/10/2005 - 01/15/2005
Rahul Lad	11/06/2006 – 01/15/2006
Sreedhar Tummalapalli	11/06/2006 – 01/15/2006
Satish Patil	11/06/2006 – 01/15/2006
Kathryn Pietsch	06/10/2007 – 09/03/2007
Hailey Gahlon	11/05/2007 – 01/18/2008
Anja Lesaga	11/05/2007 – 01/18/2008
Shui Li	06/08/2009 – 08/14/2009
Nick Struntz	11/09/2009 – 01/15/2010
Kari Schuett	11/09/2009 – 01/15/2010
Bo Zhou	11/09/2010 – 01/15/2011
Nick Bleeker	11/09/2010 – 01/15/2011
Skye Doering	09/06/2011 – 10/18/2011
Arnie Groehler	10/19/2011 – 12/04/2011
Aniekan Okan	12/05/2011 – 01/20/2012
Harrison T West	09/10/2012 – 10/25/2012
Cody Lensing	10/29/2012 – 12/10/2012
Jacob Petersburg	10/29/2012 – 12/10/2012
Liang Guo	11/05/2012 – 03/05/2013
Denise Casemore	09/21/2013 – 10/21/2013
Alex Strom	09/15/2014 – 10/17/2014
Cliff Csizmar	10/20/2014 – 12/05/2014
Jiewei Jiang	10/20/2014 – 12/05/2014
John Schultz	09/15/2015 – 10/17/2015
Dake Liu	08/2017 – 01/2019

International exchange Ph.D. students

Chunlin Zhuang	12/01/2012 – 11/30/2013
Tengfei Biang	10/01/2013 – 09/30/2014

International visiting professor

Yuesheng Dong	09/01/2013 – 08/31/2014
Xinghua Zhao	03/01/2015 – 02/29/2016

SERVICE AND PUBLIC OUTREACH

Service To The Discipline/Profession/Interdisciplinary Area(s)

Editorial board for peer-reviewed journals

- Madridge Journal of Pharmaceutical Research
- Future Medicinal Chemistry
- Molecules

Journal Reviewer Experience

- | | |
|----------------------|----------------|
| • Chem. Res. Toxic. | 2003 – present |
| • J. Med. Chem. | 2003 – present |
| • Biochemistry | 2007 – present |
| • PLoS One | 2011 – present |
| • Bioorg. Med. Chem. | 2003 – present |

- Peptides 2003
- Bioorg. Med. Chem. Lett. 2004 – present
- Cancer Lett. 2006 – present
- Mol. Pharm. 2007 – present
- Eur. J. Med. Chem. 2009 – present
- Journal of Cell Science 2011 – present
- FEBS Letters 2011 – present
- Beilstein Journal of Organic Chemistry 2012 – present
- European Journal of Gastroenterology and hepatology 2013 – present
- Molecular Cancer Therapeutics 2013 – present
- Nutrition Research 2013 – present
- Oncogene 2016 – present
- ACS Med. Chem. Lett. 2016 – present

Review panels for external funding agencies, foundations, etc.

- The National University of Singapore Research Grant 2006 – 2008
- The James and Esther King Biomedical Research Program 2006 – 2008
- Biomedical Research Council, Singapore A STAR Grant 2007 – 2008
- Natural Sciences and Engineering Research Council of Canada 2007 – 2008
- NCI RAID Program 2008 – 2009
- CDMRP (Congressionally Directed Medical Research Program) 2008 – 2010
- NIH/Cancer Biomarker Study Section 2010 – 2011
- NIH/Fogarty Review 2012
- NIH/CDP ad hoc 2015
- CDMRP (Congressionally Directed Medical Research Program) 2017
- CDMRP (Congressionally Directed Medical Research Program) 2018
- NCI/PREVENT 2019 – present

Review panels for internal funding opportunities.

- AHC Faculty Research Development Grant 2006 – 2007
- AHC Faculty Research Seed Grant 2008 – 2009
- HFHL Research Grant 2009 – 2010
- AHC India-U 2010 – 2010
- AHC Small Grant Program 2012 – 2013
- Masonic Cancer Center Pilot Grant 2012 – 2013
- Minnesota Chemoprevention Consortium Pilot Grant 2012 – 2013
- CBITG Grant 2013 – 2014
- HFHL Research Grant 2014 – 2015
- PROSPER 2016 – present

Organization of conferences, workshops, panels, symposia

- ACS National Meeting (2006, San Francisco, CA) Medicinal Chemistry Division “Activators of apoptosis” – Co-chair with Paul Hergenrother
- AACR National Meeting (2007, Los Angeles, CA) Drug Discovery and Design “Targeted Design and Delivery” – Co-chair with Diane Boschelli
- ACS National Meeting (2013, New Orleans, LA) Medicinal Chemistry Division “Mechanisms of drug resistance in cancer and novel therapies” - Chair

Service To The University/College/Department***University of Florida***

Collegiate Service and Intercollegiate Service

- Faculty Research Committee 2016 – present
- Faculty Governance Committee 2016 – present
- International Committee 2018 – present

Department/Unit Service

- Faculty Search Committee, Dept. of Med. Chem. 2016 – 2017
- Faculty Search Committee, Dept. of Med. Chem. 2017 – 2018
- Faculty Search Committee (McCurdy) 2017 – 2019
- Dept tech Search Committee 2019 – 2019

University of Minnesota

University-wide service

- Chemical Biology Interdisciplinary Steering Committee. University 2007 – 2011
- Chemical Biology Interdisciplinary Admission Committee University 2007 – 2016
- Chembio Recruitment Steering Committee, University 2006 – 2007
- Masonic Cancer Center Research Symposium Committee 2011 – 2012
- Masonic Cancer Center Research Symposium Abstract Review 2012
- Masonic Cancer Center Pathology Internal Advisory Board (Chair) 2012 – 2016
- Medical Scientist Training Program (MD/PhD) 2013 – 2015
- Healthy Food and Healthy Life Institute Advisory Board 2015 – 2016

Collegiate Service and Intercollegiate Service

- Faculty Search Committee, Dept. of Pharmaceutics 2006 – 2007
- Admission Committee for College of Pharmacy 2006 – 2009
- College of Pharmacy Diversity Task Force Committee 2009 – 2013
- Mission Self Study Committee, College of Pharmacy 2008 – 2009
- EPC committee (chair elect) 2010 – 2011
- EPC committee (chair) 2011 – 2012
- EPC committee 2010 – 2013
- Rowell Fellowship Review Committee 2012
- PPPS Oncology Faculty Search Committee, Duluth 2014 – 2016
- College Accreditation Committee 2014 – 2016

Department/Unit Service

- Dept. Med. Chem. Committee for revising the cumulative exam 2006
- Faculty Search Committee, Dept. of Med. Chem. 2006 – 2007
- Graduate Student Recruitment Committee, Dept. of Med. Chem. 2006
- Graduate Admissions Committee, Dept. of Med. Chem. 2006 – 2011
- Comprehensive exam committee, Dept. of Med. Chem. (chair: 2011) 2008 – 2011
- Faculty Search Committee, Dept of Med. Chem. 2008 – 2010
- Review committee for probationary faculties 2009 – 2013
- Med. Chem. Student Award Committee (chair) 2012
- Graduate Admission Committee, Dept. of Med. Chem. 2012 – 2013

- Graduate Recruiting Committee, Dept. of Med. Chem.
- Review committee for probationary faculties

2013 – 2015
2015