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Associate Professor
Department of Pharmacy Practice
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EDUCATION

1998-2001	Ph.D., Pharmacology-Oncology Institute of Meteria Medica, Chinese Academy of Medical Science & Peking Union Medical College Beijing, P.R.China
1995-1998	M.Sc., Pharmaceutical Sciences School of Pharmacy, Shandong Medical University Jinan, P.R.China
1991-1995	Bs. Pharm. School of Pharmacy, Shandong Medical University Jinan, P.R.China

POST-GRADUATE TRAINING

2014-2015	Specialty Practice Pharmacy Residency, Pediatrics (PGY2) CHOC Children's Hospital of Orange County Orange, CA, USA
2013-2014	General Practice Pharmacy Residency (PGY1) CHOC Children's Hospital of Orange County Orange, CA, USA
2001-2004	Postdoctoral Fellowship, Oncology/Translational Research Chao Family Comprehensive Cancer Center, University of California Irvine, Orange, CA

LICENSURE AND BOARD CERTIFICATION

03/2017- present	Advanced Practice Pharmacist (APh) (#10012) California Board of Pharmacy
07/2016 - present	Board Certified Pediatric Pharmacy Specialists (BCPPS) (#8150456) Board of Pharmacy Specialists (BPS)
04/2011 - present	Registered Pharmacist (R.Ph) (#65385) California Board of Pharmacy
01/2021 - present	Pharmacy-based Immunization Delivery Certificate American Pharmacists Association (APhA)

01/2021 - present	Good Clinical Practice (GCP) Certificate Collaborative Institutional Training Initiative (CITI) Program
04/2017 - present	Community-based Pharmacogenomics Certificate National Association of Chain Drug Stores
10/2012 - present	Basic Life Support (BLS) Certificate for Health Care Professionals American Heart Association
10/2012 - 09/2020	Pediatric Advanced Life Support (PALS) American Heart Association

ACADEMIC & PROFESSIONAL APPOINTMENTS

09/2023 – present	Associate Professor of Pharmacy Practice (Pediatrics) Department of Pharmacy Practice, Chapman University School of Pharmacy
05/2018 – present	Program Director Amgen-Chapman Oncology Medical Affairs Fellowship, Chapman University,
08/2015 – 08/2023	Assistant Professor of Pharmacy Practice (Pediatrics) Department of Pharmacy Practice, Chapman University School of Pharmacy
07/2010 – 08/2016	Adjunct Assistant Professor Department of Pharmaceutical Sciences, University of California Irvine
05/2009 – 06/2013	Associate Project Scientist Department of Hematology/Oncology, School of Medicine, University of California Irvine
09/2004 – 01/2008	Assistant Project Scientist Department of Hematology/Oncology, School of Medicine, University of California Irvine

PEER-REVIEWED PUBLICATIONS

Journal Articles, peer reviewed (* corresponding author, published or accepted)

1. Patel A, Nguyen CM, Willins K, Wang EY, Magedman G, **Yang S***. Improving Pharmacist-Led Pediatric Patient Education on Oral Chemotherapy at Home. *Children*. 2023; 10(10):1656. <https://doi.org/10.3390/children10101656>
2. Vasu D, Reidl CT, Wang E, **Yang S**, Silverman RB. Improved synthesis and anticancer activity of a potent neuronal nitric oxide synthase inhibitor. *Bioorg Med Chem Lett*. 2023;90:129329. doi:10.1016/j.bmcl.2023.129329
3. **Yang S**, Patel P, Corcoran A, Dobberpuhl E, Isidro S, Le D, Klassen A, Rho J, Tran D, Beuttler R, Nassr NN, Gruenberg K, Wong SF*. Gaps in Patient Education on Safe Handling and Disposal of Oral Chemotherapy Drugs: A Pilot Prospective Cohort Survey Study. *Journal of Contemporary Pharmacy Practice*. 2022; 70 (2): 23–33. <https://doi.org/10.37901/jcphp21-00009>
4. Tong S, Darwish S, Ariani HHN, Lozada KA, Salehi D, Cinelli MA, Silverman RB, Kaur K*, **Yang S***. A Small Peptide Increases Drug Delivery in Human Melanoma Cells. *Pharmaceutics*. 2022; 14(5):1036. <https://doi.org/10.3390/pharmaceutics14051036>
5. Alhazmi R, Tong S, Darwish S, Khanjani E, Khungar B, Chawla S, Zheng Z, Chamberlin R, Parang K*, **Yang S***. Bis-Cinnamamide Derivatives as APE/Ref-1 Inhibitors for the Treatment of Human Melanoma. *Molecules* 2022, 27, 2672. <https://doi.org/10.3390/molecules27092672>
6. Yamaki J, Chawla S, Tong S, Lozada KA, and **Yang S***. Iron Effects on *Clostridioides difficile* Toxin Production and Antimicrobial Susceptibilities. *Antibiotics* 2022, 11, 537. <https://doi.org/10.3390/antibiotics11050537>

7. Tong S, Cinelli MA, El-Sayed NS, Huang H, Patel A, Silverman RB, and **Yang S***. Inhibition of interferon-gamma-stimulated melanoma progression by targeting neuronal nitric oxide synthase (nNOS). *Sci Rep* 12, 1701 (2022). <https://doi.org/10.1038/s41598-022-05394-6>
8. Phan MT*, Tomaszewski DM, Arbuckle C, **Yang S**, Jenkins B, Fortier MA, Heyming T, Linstead E, Donaldson C, Kain Z. Evaluating the 0–10 Point Pain Scale on Adolescent Opioid Use in US Emergency Departments. *Journal of Clinical Medicine*. 2022; 11(1):38. <https://doi.org/10.3390/jcm11010038>
9. Phan MT, Tomaszewski DM*, Arbuckle C, **Yang S**, Donaldson C, Fortier M, Jenkins B, Linstead E, and Kain Z. Racial and ethnic disparities in opioid use for adolescents at US emergency departments. *BMC Pediatr* 21, 252 (2021). <https://doi.org/10.1186/s12887-021-02715-y>
10. Saghaeidehkordi A, Chen S, **Yang S**, Kaur K*. Evaluation of a Keratin 1 Targeting Peptide-Doxorubicin Conjugate in a Mouse Model of Triple-Negative Breast Cancer. *Pharmaceutics*. 2021 May 5;13(5):661. <https://doi.org/10.3390/pharmaceutics13050661>
11. Phan MT, Wong C, Tomaszewski DM, Kain ZN, Jenkins B, Donaldson C, Fortier M, **Yang S***. Evaluating Opioid Dispensing Rates among Pediatrics and Young Adults based on CURES Data Reporting in California from 2015–2019. *Journal of Contemporary Pharmacy Practice*. 2021 March; 67(4):23. <https://doi.org/10.37901/jcphp20-00012>
12. Phan M, Chavan R, Beuttler R, Benipayo N, Magedman G, Buchbinder D, Tomaszewski D, **Yang S***. Evaluating risk factors for acute graft versus host disease in pediatric hematopoietic stem cell transplant patients receiving tacrolimus. *Clin Transl Sci*. 2021 Jan 27; <https://doi.org/10.1111/cts.12982>.
13. Donaldson CD, Kain ZN, Ehwerhemuepha L, Fortier MA, Phan MT, Tomaszewski DM, **Yang S**, Feaster W, Jenkins BN*. Anxiety and Mood Disorders Impacting Physician Opioid Prescribing in the Pediatric Hospital Setting. *Journal of clinical psychology in medical settings*, 2021, 28(4), 757–770. <https://doi.org/10.1007/s10880-021-09763-7>
14. Donaldson CD, Jenkins BN, Fortier MA, Phan MT, Tomaszewski DM, **Yang S**, Kain ZN*. Parent responses to pediatric pain: The differential effects of ethnicity on opioid consumption. *J Psychosom Res*. 2020 Nov; 138:110251. <https://doi.org/10.1016/j.jpsychores.2020.110251>
15. Ehwerhemuepha L, Donaldson CD, Kain ZN, Luong V, Fortier MA, Feaster W, Weiss M, Tomaszewski D, **Yang S**, Phan M, Jenkins BN*. Race, Ethnicity, and Insurance: The Association with Opioid Use in a Pediatric Hospital Setting. *J Racial Ethn Health Disparities*. 2020 Sep 30. doi: 10.1007/s40615-020-00882-9
16. Fortier MA*, **Yang S**, Phan MT, Tomaszewski DM, Jenkins BN, Kain ZN. Children's cancer pain in a world of the opioid epidemic: Challenges and opportunities. *Pediatr Blood Cancer*. 2020 Apr;67(4):e28124. doi: 10.1002/pbc.28124. Epub 2019 Dec 18. PMID: 31850674; PMCID: PMC8266302.
17. Darwish S, Sadeghiani N, Fong S, Mozaffari S, Hamidi P, Withana T, **Yang S**, Tiwari RK*, Parang K*. Synthesis and antiproliferative activities of doxorubicin thiol conjugates and doxorubicin-SS-cyclic peptide. *Eur J Med Chem*. 2019 Jan 1;161:594-606. doi: 10.1016/j.ejmech.2018.10.042. Epub 2018 Oct 23. PMID: 30396106; PMCID: PMC8418874.
18. Tomaszewski DM*, Arbuckle C, **Yang S**, Linstead E. Trends in Opioid Use in Pediatric Patients in US Emergency Departments From 2006 to 2015. *JAMA Netw Open*. 2018 Dec 7;1(8):e186161. doi: 10.1001/jamanetworkopen.2018.6161. PMID: 30646317; PMCID: PMC6324333.
19. Yang Z*, **Yang S**, Misner BJ, Liu-Smith F, Meyskens FL. The role of APE/Ref-1 signaling pathway in hepatocellular carcinoma progression. *Int J Oncol*. 2014 Nov;45(5):1820-8. doi: 10.3892/ijo.2014.2589. Epub 2014 Aug 8. PMID: 25109342; PMCID: PMC4735689.
20. Huang H, Li H, **Yang S**, Chreifi G, Martísek P, Roman LJ, Meyskens FL, Poulos TL, Silverman RB*. Potent and selective double-headed thiophene-2-carboximidamide inhibitors of neuronal nitric oxide synthase for the treatment of melanoma. *J Med Chem*. 2014 Feb 13;57(3):686-700. doi: 10.1021/jm401252e. Epub 2014 Jan 30. PMID: 24447275; PMCID: PMC3983353.
21. Yang Z, Misner B, Ji H, Poulos TL, Silverman RB, Meyskens FL, **Yang S***. Targeting nitric oxide signaling with nNOS inhibitors as a novel strategy for the therapy and prevention of human melanoma. *Antioxid Redox Signal*. 2013 Aug 10;19(5):433-47. doi: 10.1089/ars.2012.4563. Epub 2013 Jan 18. PMID: 23199242; PMCID: PMC3704054.

22. Meyskens FL, **Yang S**. Thinking about the role (largely ignored) of heavy metals in cancer prevention: hexavalent chromium and melanoma as a case in point. *Recent Results Cancer Res.* 2011;188:65-74. doi: [10.1007/978-3-642-10858-7_5](https://doi.org/10.1007/978-3-642-10858-7_5). PMID: 21253789.
23. Yang Z, **Yang S**, Misner BJ, Chiu R, Liu F, Meyskens FL Jr. Nitric oxide initiates progression of human melanoma via a feedback loop mediated by apurinic/aprimidinic endonuclease-1/redox factor-1, which is inhibited by resveratrol. *Mol Cancer Ther.* 2008 Dec;7(12):3751-60. doi: [10.1158/1535-7163.MCT-08-0562](https://doi.org/10.1158/1535-7163.MCT-08-0562). PMID: 19074850.
24. **Yang S**, Meyskens FL. Apurinic/aprimidinic endonuclease/redox effector factor-1(APE/Ref-1): a unique target for the prevention and treatment of human melanoma. *Antioxid Redox Signal.* 2009 Mar;11(3):639-50. (Cover page) doi: [10.1089/ars.2008.2226](https://doi.org/10.1089/ars.2008.2226). PMID: 18715151; PMCID: PMC2933576.
25. **Yang S**, Misner B, Chiu R, Meyskens FL Jr. Common and distinct mechanisms of different redox-active carcinogens involved in the transformation of mouse JB6P+ cells. *Mol Carcinog.* 2008 Jul;47(7):485-91. doi: [10.1002/mc.20410](https://doi.org/10.1002/mc.20410). PMID: 18092320; PMCID: PMC4587534.
26. Kasuno K, Naqvi A, Dericco J, Yamamori T, Santhanam L, Mattagajasingh I, **Yang S**, Meyskens FL, Bosserhoff AK, Irani K. Antagonism of p66shc by melanoma inhibitory activity. *Cell Death Differ.* 2007 Aug;14(8):1414-21. doi: [10.1038/sj.cdd.4402131](https://doi.org/10.1038/sj.cdd.4402131). Epub 2007 Apr 13. PMID: 17431427.
27. Meyskens FL Jr, Farmer PJ, **Yang S**, Anton-Culver H. New perspectives on melanoma pathogenesis and chemoprevention. *Recent Results Cancer Res.* 2007;174:191-5. doi: [10.1007/978-3-540-37696-5_16](https://doi.org/10.1007/978-3-540-37696-5_16). PMID: 17302196.
28. **Yang S**, Misner BJ, Chiu RJ, Meyskens FL Jr. Redox effector factor-1, combined with reactive oxygen species, plays an important role in the transformation of JB6 cells. *Carcinogenesis.* 2007 Nov;28(11):2382-90. doi: [10.1093/carcin/bgm128](https://doi.org/10.1093/carcin/bgm128). Epub 2007 Jun 12. PMID: 17566060.
29. **Yang S**, Irani K, Heffron SE, Jurnak F, Meyskens FL Jr. Alterations in the expression of the apurinic/aprimidinic endonuclease-1/redox factor-1 (APE/Ref-1) in human melanoma and identification of the therapeutic potential of resveratrol as an APE/Ref-1 inhibitor. *Mol Cancer Ther.* 2005 Dec;4(12):1923-35. doi: [10.1158/1535-7163.MCT-05-0229](https://doi.org/10.1158/1535-7163.MCT-05-0229). PMID: 16373707.
30. **Yang S**, Meyskens FL Jr. Alterations in activating protein 1 composition correlate with phenotypic differentiation changes induced by resveratrol in human melanoma. *Mol Pharmacol.* 2005 Jan;67(1):298-308. doi: [10.1124/mol.104.006023](https://doi.org/10.1124/mol.104.006023). Epub 2004 Oct 18. PMID: 15492115.
31. **Yang S**, McNulty S, Meyskens FL Jr. During human melanoma progression AP-1 binding pairs are altered with loss of c-Jun in vitro. *Pigment Cell Res.* 2004 Feb;17(1):74-83. doi: [10.1046/j.1600-0749.2003.00114.x](https://doi.org/10.1046/j.1600-0749.2003.00114.x). PMID: 14717848.
32. McEligot AJ, **Yang S**, Meyskens FL Jr. Redox regulation by intrinsic species and extrinsic nutrients in normal and cancer cells (Invited review). *Annu Rev Nutr.* 2005;25:261-95. doi: [10.1146/annurev.nutr.25.050304.092633](https://doi.org/10.1146/annurev.nutr.25.050304.092633). PMID: 16011468.
33. McNulty SE, del Rosario R, Cen D, Meyskens FL Jr, **Yang S**. Comparative expression of NFkappaB proteins in melanocytes of normal skin vs. benign intradermal naevus and human metastatic melanoma biopsies. *Pigment Cell Res.* 2004 Apr;17(2):173-80. doi: [10.1111/j.1600-0749.2004.00128.x](https://doi.org/10.1111/j.1600-0749.2004.00128.x). PMID: 15016307.
34. **Yang S**, Fu Z, Wang F, Cao Y, Han R. [Anti-mutagenicity activity of dehydroepiandrosterone]. *Zhonghua Zhong Liu Za Zhi.* 2002 Mar;24(2):137-40. Chinese. PMID: 12015034.
35. **Yang S**, Z Fu, F Wang, Y Cao, R Han. Antioxidation activity of DHEA and its mechanisms. *Chinese Journal of Cancer (Ai Zheng)*, 2001, 20(12):1349-1354. Chinese.
36. **Yang S**, Fu ZD, and Han R. Studies on the anti-tumor promotion activities of dehydroepiandrosterone and its mechanism of action. *Yao Xue Xue Bao*, 2001 Aug; 36(8):576-580. Chinese.
37. Lou H, **Yang S**, Zhang S. Effect of WAK on immune activities. *Zhong Cheng Yao*, 2002, 24 (3): 193-195. Chinese.

Other publications (* corresponding author)

1. Nam YW, Khanjani EB, Fong S, Chawla S, Rahighi S, Ibrahim N, Parang K, Zhang M, and **Yang S***. Human Apex/Ref1 monomer with C138A mutation. *RCSB Protein Data Bank (PDB)*. 2021. PDB DOI:[10.2210/pdb7MEV/pdb](https://doi.org/10.2210/pdb7MEV/pdb).

- Nam YW, Khanjani EB, Fong S, Chawla S, Rahighi S, Ibrahim N, Parang K, Zhang M, and **Yang S***. Human Apex/Ref1 homodimer formed under oxidative condition. *RCSB Protein Data Bank (PDB)*. 2021. PDB DOI: [10.2210/pdb7MCR/pdb](https://doi.org/10.2210/pdb7MCR/pdb)
- Phan M, Lee Y, Benipayo N, and **Yang S***. Evaluation of opioid usage among pediatric oncology patients. *Journal of Oncology Pharmacy Practice*, 2019; 25(3) (Supplement) I-8.
- Phan M, Munjy L, Benipayo N, Goad J, **Yang S***. New vaccines in the pipeline 2019. *Pharmacy Times*. August 2019 (Cover story)
- Yang S**, and Wong S. Advice for patients on safe handling disposal of oral chemotherapy drugs. *California Board of Pharmacy*. *The Script*. 2018 March: Page 13.
- Phan M, Huynh T, Haroutunyan A, Shin E, Corcoran A, Patel P, **Yang S***, Wong S*. Oral chemotherapy drugs require safe handling, disposal. *California Board of Pharmacy*. *The Script*. 2017 October: Page 14-15.
- Fong S, Shevtsov S, **Yang S***. The role of neuronal nitric oxide synthase (nNOS) in interferon-gamma-induced melanoma progression. *Pigment Cell Melanoma Research*, 2017; 30: e110-e111.
- Yang S**, Lam J, Sims N, and Jordan R. Actionable Patient Safety Solution (APSS) #3D: [Pediatric Adverse Drug Events](#). *Patient Safety Movement*. February 2017 (updated August 2020).

BOOK CHAPTERS

Yang S, Rui H. *Antioxidative activity and immuno-modulative effect of DHEA and its mechanism of action*. *The Development of Chinese Cancer Research* (Vol. V), 2000, 160-163.

Yang S. Chapter 3.1 *Alkylate agents for chemotherapy*. *Cancer chemoprevention and chemotherapy in 21st Century*. Beijing: Ren Men Jun Yi Publishing Company, 2005.

PRESENTATIONS

Oral presentations/Invited seminars/Media presentations at National or International Professional Conferences or Academic Institutes

- Sun Yang**, Haley Andrews, and Fay Goldenshteyn. Hashing out the Pros and Cons of Marijuana Use: Navigating Updates and Evolving Practices. **Selected speaker**. California Society of Health-System Pharmacists (CSHP) 2023 Seminar, October 12-15, 2023, Long Beach, CA, USA.
- Sun Yang**, Anika Patel, Richard Beuttler. Pediatric ADHD and management during the COVID-19 pandemic and beyond in California. **Selected speaker**. California Society of Health-System Pharmacists (CSHP) 2022 Seminar, November 9-13, 2022, Anaheim, CA, USA.
- Sun Yang**. Food and medicine. **Invited speaker**. 2021 Community Health Seminar Series. Southcoast Chinese Culture Association. Jan. 24, 2021, Irvine, CA.
- Sun Yang**. Say no to NO: Novel drug development for human melanoma. **Invited speaker**. CHEM/BCHM Research Seminar Series. Chapman University Schmid College of Sciences and Technology. Orange, CA. November 12, 2019.
- Sun Yang**. Introduction to pediatric pharmacy services in hospitals and health systems in the U.S. **Invited Keynote Speaker**. The 4th Peninsula International Forum on Women and Children's Medicine. Nov. 30-Dec. 2, 2018, Qingdao, Shandong, China.
- Sun Yang**. Therapeutic drug monitoring of vancomycin in pediatric patients. **Invited speaker**. The 4th Peninsula International Forum on Women and Children's Medicine. Nov. 30-Dec. 2, 2018, Qingdao, Shandong, China.
- Sun Yang**. Pharmacokinetics and drug dosing of antibiotics in obese children. **Invited speaker**. The 4th Peninsula International Forum on Women and Children's Medicine. Nov. 30-Dec. 2, 2018, Qingdao, Shandong, China.
- Sun Yang**. Application of pharmacogenetics in oncology and transplant patient care: CSHP Pharmacogenomics Certificate Program. **Invited lecturer**. California Society of Health-System Pharmacists (CSHP) Seminar, Oct. 4-7, 2018, San Diego, CA, USA.

9. **Sun Yang.** Safe handling and disposal of oral anticancer chemotherapy. Session: Upholding patient and public safety through sustainable pharmaceutical disposal. **Selected speaker.** California Society of Health-System Pharmacists (CSHP) Seminar, October 4-7, 2018, San Diego, CA, USA.
10. Shirley Fong, Thimanthi Withana, Elizabeth Iantosca, Yuri Lee, Keykavous Parang, and **Sun Yang.** Effects of nanocurcumin on anthracycline-induced cardiotoxicity. **Selected for ePoster presentation.** 14th Hematology/Oncology Pharmacy Association Annual Conference. March 21-24, 2018, Denver, CO, USA.
11. **Sun Yang.** Oncology Pharmacogenetics and clinical applications. CSHP Pharmacogenomics Certificate Program. **Invited lecturer.** 2017 CSHP Seminar. Oct. 26-29, Las Vegas, NV
12. **Sun Yang.** New challenge: Pediatric Adverse Drug Events Panel. **Invited speaker.** 5th Annual World Patient Safety, Science & Technology Summit. Feb. 3-4, 2017, Laguna Beach, CA, USA.
13. **Sun Yang.** Development of Novel APE/Ref-1 inhibitors for the treatment of human melanoma. **Selected speaker.** First Chapman University School of Pharmacy (CUSP)/University of Irvine Research Mixer, November 17, 2016. Irvine, CA, USA.
14. **Sun Yang.** Increased risk of *C. difficile* infection (CDI) associated with blood transfusions in relapsed pediatric acute lymphoblastic leukemia (ALL) patients. **Selected speaker.** Western States Conference, May 2015, Paradise Point, San Diego, CA, USA.
15. **Sun Yang.** Possible risk factors associated with etoposide infusion reaction in pediatric oncology patients. **Selected speaker.** Western States Conference. May 2014. Paradise Point, San Diego, CA, USA.
16. **Sun Yang.** APE/Ref-1, a druggable target for therapy of human melanoma-updates. **Selected speaker.** 17th Annual Meeting of Pan American Society for Pigment Cell Research. Sept. 19-22, 2012, Deer Valley, Utah, USA.
17. **Sun Yang.** Development of novel APE/Ref-1 inhibitors with promising anti-melanoma activities. **Selected speaker.** 21st International Pigment Cell Conference, Sept. 21-24, 2011. Bordeaux, France.
18. **Sun Yang.** APE/Ref-1 deficiencies associated with development of less malignant phenotype. **Selected speaker.** 15th Annual meeting of Pan American Society for Pigment Cell Research, Sept. 4-7, 2010. Memphis, Tennessee, USA.
19. **Sun Yang.** Say NO to NO (nitric oxide). **Invited speaker.** 3rd Asian Society for Pigment Cell Research Annual Meeting, Jun 11-13, 2009, Seoul, Korea.
20. **Sun Yang.** APE/Ref-1 targeting in human melanoma. **Invited speaker.** Translational Oncology Program Retreat, Sept. 6, 2007, Aliso Creek Inn, South Laguna Beach, CA, USA.
21. **Sun Yang.** Elevated APE/Ref-1 in human melanoma, a potential therapeutic target for therapy? **Selected speaker.** 19th International Pigment Cell Conference, Reston, Sept. 17-22, 2005, Washington DC, USA.
22. **Sun Yang.** The therapeutic potential of APE/Ref-1. **Selected speaker.** CCSG Structural Molecular Biology Program Retreat. June 20, 2005, Balboa Bay Club, Newport, CA, USA.
23. **Sun Yang. Invited Seminar:** "Studies of Aberrant Redox-related Signalings in Human Melanoma". March 22, 2005. The Wistar Institute, Philadelphia, PA, USA.
24. **Sun Yang. Invited Seminar:** "Studies of Aberrant Redox-related Signalings in Human Melanoma". March 23, 2005. National Institute of Health, Bethesda, MD, USA.
25. **Sun Yang.** Expression of APE/Ref-1 is elevated with progression of human melanoma and the therapeutic potential of APE/Ref-1 inhibitors. **Selected speaker.** American Association of Cancer Research (AACR) Annual meeting, April 19, 2005, Anaheim, CA, USA.
26. **Sun Yang. Invited Seminar:** "Studies of aberrant transcription signaling (AP-1) in Human Melanoma". Sept. 22, 2004. Arizona Cancer Center, Tucson, AZ, USA.
27. **Sun Yang.** Resveratrol induces AP-1 inhibition, altered AP-1 composition and increased expression of specific JUN and FOS family proteins in human melanoma cells. **Selected Speaker.** June 24-27, 2004. XIIth annual meeting of the Pan American Society for Pigment cell research. Newport Beach, CA, USA.

Peer-reviewed Abstracts/Poster Presentations at National or International Professional Conferences or Academic Institute (* corresponding author)

1. Tong S, Patel A, Lozada KA, Cinelli M, Silverman RB, and **Yang S***. *Combination immunotherapy and targeted therapy to improve melanoma therapy: nNOS, an Achilles' heel?* 4th Annual CUSP Research Day, May 25, 2022 (Selected for oral presentation by Tong S).
2. Lozada KA, Silverman RB, and **Yang S***. *Effects of novel anti-cancer immunotherapy for melanoma by targeting nNOS*. 4th Annual CUSP Research Day, May 25, 2022 (Selected for oral presentation by Lozada KA).
3. Lozada KA, Tong S, Silverman R, and **Yang S***. *Development of novel anti-cancer immunotherapy for melanoma by targeting nNOS*. Keystone Symposia: Cancer Immunotherapy: Decoding the cancer immunity interactome. March 20-24, 2022. British Columbia, Canada.
4. Lozada KA, and **Yang S***. *Development of novel anti-cancer immunotherapy for melanoma by targeting nNOS*. PanAmerican Society for Pigment Cell Research Annual Conference, Sept. 22-25, 2021, Lexington, KY.
5. Nguyen C, Willins K, Magedman G, and **Yang S***. *Improving Patient Education for Pediatric Oncology Patients Taking Oral Chemotherapy at Home*. CSHP Seminar, Nov. 2-6, 2021. Anaheim, CA.
6. Donaldson CD, Kain ZN, Ehwerhemuepha L, Fortier MA, Phan M, Tomaszewski D, **Yang S**, Feaster W, & Jenkins BN. (2020, October). *Mental health and pain as predictors of pediatric opioid use: Insights from electronic medical records*. The annual meeting for the Western Psychological Association (WPA).
7. Phan M, Benipayo N, Tomaszewski D, Magedman G, Chavan R, and **Yang S***. *Evaluating tacrolimus dosing for acute graft-versus-host-disease (aGVHD) prophylaxis in pediatric bone marrow transplant patients*. 16th Annual Conference of Hematology/Oncology Pharmacy Association (HOPA). March 11-14, 2020, Tampa, FL.
8. Phan M, Magedman G, Adams N, Tomaszewski D, and **Yang S***. *An Evaluation on Inpatient Opioid Utilization Among Pediatric Patients with Cancer – a Retrospective, Single Center, Cross Sectional Study*. 16th Annual Conference of Hematology/Oncology Pharmacy Association (HOPA). March 11-14, 2020, Tampa, FL.
9. Wong CJ, Hom J, Phan M, **Yang S***, Tomaszewski D*. *Opioid usage among pediatrics and young adults in California from 2015-2018: a cross-sectional study*. 2019 ASHP Midyear Clinical Meeting and Exhibition. Dec. 8-12, 2019, Las Vegas, NV.
10. Sharifi B, Rahighi S, Nam YW, Fong S, Zhang M, **Yang S***. *Development of novel Apurinic/Apyrimidinic endonuclease/redox-factor 1 inhibitors for human melanoma*. 8th International Congress on Cancer Metastasis, October. 25-27, 2019, San Francisco, CA.
11. Klassen A, Rho J, Tran D, Dobberpuhl E, Isidro S, Le D, Corcoran A, Patel P, Wong SF*, and **Yang S***. *Safe handling and disposal of oral anti-cancer chemotherapy – survey studies of patients and providers, an interim analysis*. AACP Pharmacy Education Annual Meeting, July 13-17, 2019, Chicago, IL.
12. Klassen A, Rho J, Tran D, Dobberpuhl E, Isidro S, Le D, Corcoran A, Patel P, Wong SF*, and **Yang S***. *Safe handling and disposal of oral anti-cancer chemotherapy – an advocacy initiative to improve public and environmental health*. AACP Pharmacy Education Annual Meeting, July 13-17, 2019, Chicago, IL.
13. Benipayo N, Lee YR, Phan M, Magedman G, and **Yang S***. *Evaluation of the Opioid Usage Among Pediatric Oncology Patients*. CUSP 2nd Annual Research Day, May 10, 2019, Irvine, CA.
14. Dobberpuhl E, Isidro S, Le D, Klassen A, Rho J, Tran D, Wong SF*, **Yang S***. *Safe Handling and Disposal of Oral Anticancer Chemotherapy – Longitudinal Advocacy*. CUSP 2nd Annual Research Day, May 10, 2019, Irvine, CA.
15. Sharifi B, Rahighi S, Nam YW, Zhang M, **Yang S***. *Development of novel Apurinic/Apyrimidinic endonuclease/redox-factor 1 inhibitors for the treatment of human melanoma*. CUSP 2nd Annual Research Day, May 10, 2019, Irvine, CA. (Selected for oral presentation by B. Sharifi)

16. Phan M, Tomaszewski D*, Arbuckle C, Benipayo N, Fortier M, Jenkins B, Kain Z, Magedman G, and **Yang S**. *An Evaluation on Pediatric Opioid Prescription Trends*. CUSP 2nd Annual Research Day, May 10, 2019, Irvine, CA. (Selected for oral presentation by M. Phan)
17. Chawla S, Yamaki J, and **Yang S***. *Effects of iron on Clostridioides difficile proliferation and toxin production*. CUSP 2nd Annual Research Day, May 10, 2019, Irvine, CA. (Selected for oral presentation by S. Chawla)
18. Fong S, Sharifi B, Silverman R, and **Yang S***. *Role of Neuronal Nitric Oxide Synthase (nNOS) in Interferon-Gamma (IFN-γ)-Induced Melanoma Progression*. CUSP 2nd Annual Research Day, May 10, 2019, Irvine, CA.
19. Phan M, Lee YR, Benipayo N, Tomaszewski D, Magedman G, and **Yang S***. *Evaluation of opioid usage among pediatric patients*. 15th Annual Conference of Hematology/Oncology Pharmacy Association (HOPA), April 3-6, 2019, Fort Worth, TX. (Selected for ePoster presentation by M. Phan)
20. Klassen A, Rho J, Tran D, Dobberpuhl E, Isidro S, Le D, Corcoran A, Patel P, Wong SF*, and **Yang S***. *Safe handling and disposal of oral anti-cancer chemotherapy – patient and pharmacist survey study*. APhA 2019 Annual Meeting and Exposition, March 22-25, 2019, Seattle, WA.
21. Lee YR, Phan M, Benipayo N, and **Yang S***. *Evaluation of the opioid usage among pediatric oncology patients*. ASHP Midyear Conference, December 2-6, 2018, Anaheim, CA.
22. Fong S, Sharifi B, Silverman R, and **Yang S***. *The role of Neuronal Nitric Oxide Synthase (nNOS) in interferon-gamma-induced melanoma progression*. Joint Montagna Symposium on the Biology of Skin and PanAmerican Society for Pigment Cell Research Conference, October 17-22, 2018, Gleneden Beach, OR.
23. Isidro S, Dobberpuhl E, Le D, **Yang S***, and Wong SF*. *Pilot study for safe handling and disposal of oral cancer chemotherapy – patient survey*. Annual California Society of Health-System Pharmacists Seminar, October 4-7, 2018, San Diego, CA.
24. Alhazmi R, Darwish S, Fong S, Parang K, and **Yang S***. *Improved anti-tumor activity of a novel APE/Ref-1 inhibitor using a cyclic peptide as nano drug delivery system for melanoma therapy*. NanoTech 2018 Conference & Expo, May 13-16, 2018, Anaheim, CA.
25. Corcoran A, Patel P, Haroutunyan A, Huynh T, Phan M, Shin E, **Yang S***, and Wong SF*. *Safe handling and disposal of oral anti-cancer chemotherapy*. American Pharmacists Association (APhA) Annual Meeting and Exposition. March 16-19, 2018, Nashville, TN.
26. Fong S, and **Yang S***. *The role of neuronal nitric oxide synthase (nNOS) in interferon-gamma-induced melanoma progression*. The 9th World Congress of Melanoma and 14th International Congress of the Society for Melanoma Research, October 18-21, 2017, Brisbane, Australia.
27. Fong S, Shevtsov S, and **Yang S***. *The role of Neuronal Nitric Oxide Synthase (nNOS) in Interferon-gamma-Induced Melanoma Progression*. 23rd International Federation of Pigment Cell Societies Conference, August 26-30, 2017, Denver, CO.
28. Phan M, Haroutunyan A, Huynh T, Shin E, **Yang S***, and Wong SF*. *Quality Improvement (QI) Model of Safe Handling and Disposal of Oral Anti-Cancer Chemotherapy – Patients, Caregivers, and the Public*. 2016 NABP 112th Annual Meeting, May 14-17, 2016, San Diego, CA.
29. Huynh T, Haroutunyan A, Phan M, Shin E, **Yang S***, and Wong SF*. *Assess Patient Knowledge and Awareness of the Safe Handling and Disposal of Oral Anti-Cancer Chemotherapy*. 2016 NABP 112th Annual Meeting, May 14-17, 2016, San Diego, CA.
30. **Yang S***, Yang Z, Silverman RB, Meyskens FL. *Targeting nitric oxide signaling with nNOS inhibitors as a novel strategy for the therapy and prevention of human melanoma*. American Association for Cancer Research (AACR) 2016 Annual Meeting, April 16-20, 2016, New Orleans, LA.
31. **Yang S***, Misner B, Wallace D, Meyskens FL. *Mitochondrial NOS, a potential mechanism protecting melanoma cells from oxidative stress*. 2012 Society for Melanoma Research Congress, Nov. 8-11, 2012, Hollywood, CA.
32. **Yang S***, Yang Z, Meyskens FL*. *nNOS, a potential druggable target for melanoma prevention and chemotherapy?* 6th International Melanoma Research Congress Conference, Nov. 1-4, 2009, Boston, NJ.

33. Yang Z, **Yang S**, Meyskens FL*. *The critical role of APE/Ref-1 in the progression of human hepatoma*. The 60th Annual Meeting of American Association for the Study of Liver Diseases (AASLD). Oct. 30-Nov. 3, 2009, Boston, NJ.
34. **Yang S***, Misner B, Chiu R, and Meyskens FL*. *Ref-1 Deficiencies inhibited cellular Transformation and Metastatic Potential of human melanoma cells*. 4th International Melanoma Research Congress Conference, Nov.1-4, 2007, New York, NY.
35. Meyskens FL*, **Yang S***. *What does redox metabolism, printers/lithographers and Hip replacement have to do with prevention of melanoma?* 2007 Annual meeting of Society of Investigative Dermatology, May 9-12, 2007, Los Angeles, CA.
36. **Yang S***. *APE/Ref-1, combined with ROS plays an important role in the transformation of JB6 cells*. 2007 Annual meeting of American Association of Cancer Research, April 14-18, 2007, Los Angeles, CA.
37. Misner B, Meyskens FL*, and **Yang S***. *Development of new transformants of mouse JB6P series cells as tools for understanding redox and transcriptional factor regulation*. 2007 Annual meeting of American Association of Cancer Research, April 14-18, 2007, Los Angeles, CA.
38. **Yang S**, Meyskens FL*. *Alterations in AP-1 signaling, mediated by AP-1 composition changes correlate with phenotypic differentiation induced by resveratrol in human melanoma*. 2nd International melanoma Research Congress, November 13-16, 2004, Phoenix, AZ.
39. **Yang S**, Meyskens FL*. *Alterations in AP-1 signaling, mediated by AP-1 composition changes and reduced ROS level, correlate with phenotypic differentiation induced by resveratrol in melanoma*. 2004 Montagna Symposium on the Biology of Skin. Oct. 15-19, 2004, Salishan Lodge, OR.
40. **Yang S**, and Meyskens FL*. *AP-1 is an interesting target for human melanoma therapy and prevention*. The XIIth Annual meeting of the Pan American Society for Pigment Cell Research, 2004, Newport Beach, CA.
41. **Yang S**, Cen D, Meyskens FL*. *AP-1 composition shift plays a critical role in resveratrol-induced differentiation in human melanoma*. The 2nd AACR frontier cancer prevention meeting, 2003, Phoenix, AZ.
42. **Yang S**, McNulty S, Cen D, Meyskens FL*. *AP-1 composition shift plays a critical role in resveratrol-induced differentiation in human melanoma*. First International Melanoma Research Society Conference, 2003, Philadelphia, PA.
43. **Yang S** and Meyskens FL*. *During human melanoma progression AP-1 binding pairs are altered with replacement of FosB by Fra-1 and loss of c-Jun in vitro*. 94th Annual Meeting of AACR, 2003, Washington DC.
44. **Yang S** and Meyskens FL*. *During human melanoma progression AP-1 composition play an important role*. 18th International Pigment Cell Conference (IPCC), Egmond aan Zee, 2002, The Netherlands.
45. **Yang S**, Fu Z, and Han R*. *Inhibitory effect of DHEA on experimentally induced osteoporosis*. 93rd Annual Meeting of AACR, 2002, San Francisco, CA.
46. **Yang S** and Han R*. *Studies on the anti-oxidative activities of DHEA and its mechanisms*. Fifth Annual Conference of Chinese Association of Cancer Research, 2000, Xiamen, China.

ACTIVE MEMBERSHIP IN ACADEMIC AND SCHOLARLY ORGANIZATIONS

American Association of Colleges of Pharmacy (AACP)
 American Society of Health-System Pharmacists (ASHP)
 California Society of Health-System Pharmacists (CSHP)
 California Pharmacist Association (CPhA)
 Hematology/Oncology Pharmacy Association (HOPA)
 Pan American Society for Pigment Cell Research (PASPCR)
 International Federation of Pigment Cell Societies (IFPC)
 Pediatric Pharmacy Association (PPA)
 American Association for Cancer Research (AACR)

AWARDS

09/2019 **Grant Writers' Bootcamp Award, Chapman University Office of Research**

05/2008	Travel Award , <i>International Federation of Pigment Cell Societies</i>
06/2004	Eugene M. Farber Endowment Travel Award , <i>Society of Investigative Dermatology</i>
03/2004	Travel Award , <i>NIH Pigment Cell Development Workshop, Bethesda, MD</i>
04/2000	First Prize , <i>5th Annual Conference of Chinese Association of Cancer research</i>

RESEARCH SUPPORT AND GRANTS

Ongoing Research Support

NIGMS R35 (1R35GM131788-01, PI: R. Silverman) (Sub-contract PI: **Yang S**) 05/2019–04/2024
The goal of this project is to develop novel nNOS inhibitors for multiple indications.

Pediatric Pharmacy Association Small Research Grant (PI: **Yang S**) 05/2022–09/2023
The goal of this project is to determine the changes in the prescribing and dispensing of ADHD drugs to children after the COVID-19 outbreak in different age groups.

Completed Research Support

Pediatric Pharmacy Association Small Research Grant (PI: **Yang S**) 05/2022–05/2023
The goal of this project is to determine the changes in the prescribing and dispensing of ADHD drugs to children after the COVID-19 outbreak in different age groups.

Chapman Faculty Opportunity Fund (PI: **Yang S**) 06/2021–05/2022
The goal of this project is to study the risk factors associated with C. difficile infection in pediatric oncology patients.

K08 (1K08CA179084-01A1) (PI: **Yang S**) 09/2014–08/2020
The goal of this project was to develop novel APE/Ref-1 inhibitors for melanoma therapy and chemoprevention.

Kay Family Foundation Data Analytics Grant Program Awards (co-PI) 07/2017–08/2020
The goal of this project was to evaluate the use of prescription opioids among adolescents and young adults for non-cancer and cancer related pain.

Chapman University Faculty Opportunity Grant (PI: **Yang S**) 06/2018–05/2019
The goal of this project was to develop novel nNOS inhibitors for human melanoma therapy.

Chapman Undergraduate Scholarly Research/Creative Activity Grant (Faculty advisor) 12/2017–05/2018
The goal of this project was to determine the effects of nanocurcumin on doxorubicin-induced cardiotoxicity.

Chapman Undergraduate Scholarly Research/Creative Activity Grant (Faculty advisor) 12/2016–05/2017
The goal of this project was to determine the effects of (WR)₅-curcumin conjugate on doxorubicin-induced cardiotoxicity.

U.S PATENTS

1. United States patent: **8,642,282 B2** (Feb. 4, 2014): Frank L. Meyskens, Richard B. Silverman, **Sun Yang**, et al. *Inhibitors of nitric oxide synthase for treatment of melanoma.*
2. United States patent: **9,090,589 B2** (Jul. 28, 2015): Richard B. Silverman, Frank L. Meyskens, **Sun Yang**, et al. *Specific nNOS inhibitors for the therapy and prevention of human melanoma.*
3. United States patent: **11,439,632** (Sept. 13, 2022): Richard B. Silverman, and **Sun Yang**. *Use of neuronal nitric oxide synthase inhibitors for immunotherapy in melanoma patients.*

SERVICES ON CHAPMAN UNIVERSITY

09/2015 – 08/2018	CUSP	CUSP Student Affairs Committee
09/2015 – 08/2019	CUSP	CUSP Science Committee
09/2016 – 08/2018	CUSP	CUSP Faculty Search Committee
12/2020 – 03/2021		

09/2017 – present	CUSP	CUSP GPRC Committee
09/2018 – 08/2019	PHP	PHP Residency Advisory Committee
09/2019 – 08/2020	CUSP	OSCE Committee
08/2016 – present	CUSP	Class of 2019 Student Success Advisor Class of 2023 Student Success Advisor
05/2022 – present	CUSP	Industry Pharmacists Organization (IPhO) Student Chapter Faculty Advisor

OTHER PROFESSIONAL SERVICE

- **Book Chapter Reviewer** (09/2016)
Updates in Therapeutics: 2017 Pediatric Pharmacy Preparatory Review and Recertification Course-Practice Management published by the American College of Clinical Pharmacy (ACCP), 2017.
- **CUSP Teaching Certificate Program Adviser-CHOC residents** (08/2018- present)
- **SWOG Cancer Research Network Drug Information Subcommittee Member** (05/2017– present)
 - SWOG Melanoma Committee Pharmacist Liaison
 - SWOG Cancer Prevention and Control Committee Pharmacist Liaison
- **Organization Officer**
 - Treasurer, Orange County Pharmacists Association (OCPhA) (03/2022 - present)
- **Journal and Manuscript Review**
 - Scientific Reports (2020 – present)
 - Journal of Contemporary Pharmacy Practice (2020 – present)
 - PLOS ONE (2020 – present)
 - Journal of the American Pharmacists Association (2022– present)