

CURRICULUM VITAE

Xueyuan Cao, PhD

Associate Professor
University of Tennessee Health Science Center
College of Nursing
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EDUCATION:

Institution	Degree	Date of Degree
Shandong Agricultural University Tai'an, China	BA (Horticulture)	08/89-07/93
Institute of Genetics Chinese Academy of Science Beijing, China	MS (Genetics)	08/93-08/96
Iowa State University Ames, IA	PhD (MCDB)	08/99-12/05
Iowa State University Ames, IA	MS (Statistics)	01/05-12/06
University of Memphis Memphis, TN	PhD (Applied Statistics)	08/09-08/14

HONORS/AWARDS:

Member of Pinnacle Honor Society, 2011
All But Dissertation (ABD) Tuition Scholarships, Iowa State University, 2005-2006
Molecular, Cellular and Developmental Biology competitive proposal award, 2002
Premium for Academic Excellence (PACE), Iowa State University, 1999-2000

MILITARY SERVICE:

Not Applicable

BOARD CERTIFICATION:

Not Applicable

LICENSURE:

Not Applicable

SOCIETY MEMBERSHIPS:

International Chinese Statistical Association (ICSA), 2015-present
American Statistical Association (ASA), 2006 – present member
Treasurer of West Tennessee Chapter of American Statistical Association, 2011-present
Eastern North American Region (ENAR), 2012-2013
American Medical Informatics Association (AMIA), 2009

UNIVERSITY APPOINTMENTS:

Type/Rank	Institution	Date (mo/yr)
Associate Professor (Tenure track)	Health Promotion and Disease Prevention College of Nursing, UT Health Science Center	7/23 – present
Assistant Professor	Health Promotion and Disease Prevention	01/22 – 6/23

(Tenure track)	College of Nursing, UT Health Science Center	
Assistant Professor (Tenure track)	Department of Acute and Tertiary Care College of Nursing, UT Health Science Center	10/17 – 12/21
Assistant Professor	Department of Preventive Medicine College of Medicine, UT Health Science Center	07/18 – present

HOSPITAL/CLINICAL APPOINTMENTS:

<u>Type/Rank</u>	<u>Institution</u>	<u>Date (mo/yr)</u>
Lead Senior Biostatistician	St Jude Children's Research Hospital Department of Biostatistics,	11/15 – 10/17
Senior Biostatistician	St Jude Children's Research Hospital Department of Biostatistics	08/12 – 10/15
Biostatistician	St Jude Children's Research Hospital Department of Biostatistics	06/09 – 7/12
Statistical Analyst	St Jude Children's Research Hospital Department of Biostatistics	01/07 – 05/09

OTHER ACADEMIC APPOINTMENTS:

<u>Type/Rank</u>	<u>Institution</u>	<u>Date (mo/yr)</u>
Teaching Assistant	Iowa State University Department of Statistics	09/06 – 12/06
Postdoctoral Fellow	Iowa State University Department of GDCB	05/06 – 09/06
Graduate Assistant	Iowa State University Department of GDCB	08/99 – 05/06
Research Assistant	Institute of Genetics, Chinese Academy of Sciences	08/93 – 07/99

TEACHING EXPERIENCE:

University of Tennessee Health Science Center

(Fall 2018)	BioE810: Independent Study: Study Design and Data Analysis for Research in the Health Sciences
(Spring 2019)	NSG934: PhD Student Seminars
(Fall 2019)	BioE852: Introduction of Biostatistics to the Health Sciences
(Fall 2020)	BioE852: Introduction of Biostatistics to the Health Sciences
(Spring 2021)	NSG934: PhD Student Seminars
(Fall 2021)	BioE852: Introduction of Biostatistics to the Health Sciences
(Spring 2022)	NSG934: PhD Student Seminars
(Fall 2022)	BioE852: Introduction of Biostatistics to the Health Sciences
(Spring 2023)	NSG934: PhD Student Seminars

St Jude Children's Research Hospital

(2014)	High performance computing using institutional cluster
(2013)	PROMISE analysis training for DBCBB

Iowa State University

(Fall 2005)	Introduction to Statistics.
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(Spring 2004) Molecular Genetics Lab.

EDITORIAL APPOINTMENTS:

Editorial Board for Austin Biometrics and Biostatistics	2014 - present
Editorial Board for Annals of Biometrics & Biostatistics	2013 - present
Editorial Board for BioMed Research International	2011 - present
Editorial Board for Computational and Mathematical Methods in Medicine	2014 - 09/2017

RESIDENTS/FELLOWS/GRADUATE STUDENTS TRAINED

Completed PhDs as member of dissertation committee (5)

- Amal Assa, December 2022
- Patrick Delvin, December 2022
- Pamela Harris, May 2022
- Sandra Madubuonwu, August 2021
- Brian Lewis, May 2020

In Progress Doctoral Candidates:

Committee member for 5 students

GRANT SUPPORT:

Agency

Project Title

National Cancer Institute (NCI) R01CA270120	Integrated Systems Biology of Pediatric AML. Amount: \$ 3,350,281. Funding Period: 12/15/2022-11/30/2027 PI: Lamba, J. & Pounds S; Role: co-investigator, local PI.
Tennessee Department of Health (TDH)	Interdisciplinary PrEP Bootcamp for Healthcare Professional Learners Amount: \$129,779 Funding Period: 01/23 – 6/2024 PI: Walker, C.; Role: co-investigator
The Campbell Foundation	Perioperative Cocktail Injection for Posterior Spinal Fusion Surgery in Adolescent Idiopathic Scoliosis Amount: \$3,480 Funding Period: 03/15/2022 - 3/14/2023 Role: contracted Statistician
National Heart, Lung, and Blood Inst. 5K01HL153210	Contributions of biopsychosocial factors in sickle cell disease pain Amount: \$402,258 Funding Period: 3/01/2022 - 6/30/2024 PI: Roach K.; Role: Statistician
National Academy of Neuropsychology (NAN)	The utility of the Neuro-QoL measures to trigger neuropsychological assessment post-aneurysmal subarachnoid hemorrhage: A pilot study Amount: \$15,000 Funding Period: 10/01/2021 - 8/31/2023 PI: Stanfill A.; Role: Statistician
National Cancer Institute (NCI) R01CA132946-12A	Genomics of AML Prognosis. Amount: \$1,921,396. Funding Period: 7/23/2021-6/30/2026 PI: Lamba, J. & Pounds S; Role: co-investigator, local PI.
National Institute of Nursing Res 1R01NR017407-02S1	Common Fund Data Supplement to A Multivariate Predictive Model for Long- term Disability Post Subarachnoid Hemorrhage in

	Caucasian and African Populations Amounts: \$61,745 Funding Period: 8/2019-7/2020 PI: Stanfill, A. Role: Co-investigator
National Institute of Nursing Res R01NR017850	Zero Degree head positioning In Acute ischemic stroke (ZODIAC) Amounts: \$2,362,361 Funding Period: 9/2018-6/2023 PI: Alexandrov, A. Role: Statistician
National Cancer Institute (NCI) R01CA132946-06A1	Pharmacogenetics of the Ara-C Metabolic Pathway. Amount: \$1,520,035.00. Funding Period: 5/2014-4/30/2019 PI: Lamba, J. & Pounds S; Role: co-investigator
National Cancer Institute (NCI) P30CA021765-35	CORE Biostatistics Shared Resource Amount: \$1,858,630.00. Funding Period: 3/2014 - 2/2019 PI: Boyett J.
National Cancer Institute (NCI) P30CA021765-34	CORE Biostatistics Shared Resource Amount: \$1,455,166.00. Funding Period: 03/2012-2/2014 PI: Boyett J.
National Cancer Institute (NCI) R01CA132946-01	Pharmacogenetics of the Ara-C Metabolic Pathway. Amount: \$1,280,621.00. Funding Period: 04/2008-1/2013 PI: Lamba, J; Role: co-investigator

CONTRIBUTED/INVITED TALKS:

1. **Cao X**, Wang M, Bowman D, Pounds S, and George EO "Link genomics and clinical outcomes, an integrated approach", Invited talk in *MCBIOS 2019* (16th Annual Conference of the Midsouth Computational Biology & Bioinformatics Society). March 28-30, 2019. Birmingham, AL
2. **Cao X**, Wang M, Bowman D, Pounds S and George EO. Integrated association testing of multiple forms of omics data with an endpoint of interest. *2018 ICSA Applied Statistics Symposium*. June 14-17, 2018. New Brunswick, NJ
3. POST: a framework for set-based association analysis in high-dimensional data. *IEEE International Conference on Bioinformatics and Biomedicine (BIBM2017)*. Nov 13-16. Kansas City, MO, USA
4. CC-PROMISE: Projection onto the most interesting statistical evidence (PROMISE) with canonical correlation to integrate gene expression and methylation data with multiple pharmacological and clinical endpoints. *UT-KBRIN Bioinformatics Summit 2016*. Apr 8-10, 2016. Lake Barkley State Resort Park in Cadiz, KY
5. Big data in biomedical research. *IEEE International Conference on Big Data Analysis (ICBDA2016)*. March 12-14, 2016. Hangzhou, China
6. Association Pattern Test (APT): a hypothesis testing procedure to identify specific biologically interesting associations with multiple phenotype variables. *Fall Conference on Statistics in Biology*. October 13 ~ 15, 2008, Ames, Iowa, USA
7. Molecular analysis of the CRINKLY4-like gene family in *Arabidopsis thaliana*. *The Plant Sciences Institute Symposia "Plant Proteomes: Structure, Changes, Interactions and Functions"* June 20-23, 2002. Ames, Iowa.

PEER REVIEWED PRESENTATIONS:

8. Marrero, R. J., **Cao, X.**, Wu, H., Inaba, H., Raimondi, S. C., Pui, C.-H., Ribeiro, R. C., Rubnitz, J. E., Pounds, S., Lamba, J. K. (2022) Genome-Wide Association Study Identifies Variants Associated with Clinical Outcomes in Pediatric Patients with Newly Diagnosed Acute Myeloid Leukemia," Poster, Conference/Symposium. *64th ASH Annual Meeting*, New Orleans, LA, December 11, 2022.

9. Nguyen, N. H.K., Tagmount, A., Rubnitz, J. E., Ribeiro, R. C., **Cao, X.**, Pounds, S., Vulpe, C. D., Lamba, J. K. (2022) Genome-Wide CRISPR/Cas9 Screen Identifies AraC-Daunorubicin-Etoposide (ADE) Response Modulators Associated with Clinical Outcomes in Pediatric AML. 64th ASH Annual Meeting, New Orleans, LA, December 11, 2022.
10. Lamba, J. K., Marrero, R. J., Elsayed, A. H., **Cao, X.**, Wu, H., Inaba, H., Raimondi, S. C., Pui, C.-H., Ribeiro, R. C., Rubnitz, J. E. (2022) Personalization of Induction Therapy for Pediatric AML to Ara-C+Dauno+ Etoposide (ADE) or Clofarabine+Ara-C According to a Polygenic Ara-C SNP Score- ACS10. 64th ASH Annual Meeting, New Orleans, LA, December 11, 2022.
11. Lamba, J. K., **Cao, X.**, Wu, H., Inaba, H., Ribeiro, R. C., Peng, J., Gruber, T. A., Rubnitz, J. E., Pounds, S. (2022) Proteomic Analysis Identifies Epigenetic Modifiers and Potential Negative Regulators of Leukemogenesis KMD6A and SETDB1 to be Induced Post In Vivo Decitabine Exposure in Pediatric AML. 64th ASH Annual Meeting, New Orleans, LA, December 11, 2022.
12. Marchi, F., Scaff, F., **Cao, X.**, Ribeiro, R. C., Rubnitz, J. E., Pounds, S., Lamba, J. K (2022) A Cibersortx Signature Predicts Outcome in Pediatric AML Patients. 64th ASH Annual Meetin, New Orleans, LA, December 10, 2022.
13. Devlin, P., Cao, X., Prescott, D., Stanfill, A. G. (2022) Trajectories Of Localized And Systemic Cytokine Change Following Aneurysmal Subarachnoid Hemorrhage. 2022 ISONG World Congress. Durham, NC November 11, 2022.
14. Schenck, L., Baughman, B. C., Cao, X., Stanfill, A. G. (2022) Association of Race and Cognitive Impairment in Retired NFL Athletes. NAN 42nd Annual Conference. Denver, CO October 13-15 2022.
15. Powell-Roach, K.L., Yao, Y., **Cao, X.**, Wallace, M.R., Cruz-Almeida, Y., Molokie, R.E., Wang, Z.J., Wilkie, D.J., AVPR1A associations with experimental and environmental pain and stress in sickle cell disease. International Association for the Study of Pain, 2022 World Congress on Pain. Toronto, Canada 09/19-23/2022
16. Nichols, J. H., Williams, E. P., Parvathareddy, J., Cao, X., Kong, Y., Jonsson, C. B. (2022), A low dose of SARS-CoV-2 infection provides protection against homologous and heterologous rechallenge in hACE2-K18 mice. ASV 2022 Madison, WI, July 16, 2022.
17. Pounds, S., Cao, X., Oral Presentation. (2022) Gene-set distance analysis (GSDA): a powerful tool for gene-set association analysis, The Memphis DATA Conference 2022, Memphis, TN, April 1, 2022.
18. Stanfill, A. & **Cao, X.** (2021) Genotype-expression interactions in HTR2A across human brain regions. Abstract for podium presentation for International Society of Nurses in Genetics conference, virtual. November 5-7.
19. Wynja, K., Prescott, D., Baughman, B., Alexandrov, A.W., Cao, X., Stanfill, A. (2021). Use of the Neuro-QoL Measures for Assessment of Contributors to Long-term Quality of Life, Post-Aneurysmal Subarachnoid Hemorrhage. International Stroke Conference. 03/11/2021
20. Stanfill, A., & **Cao, X.** (2020). Using Publicly Available Multi-Omic Datasets to Enhance A Program Of Research. International Society of Nurses in Genetics Conference, Durham, NC. Expert Lecture. 11/13-15/2020
21. Stanfill, A., Simpson, C., **Cao, X.**, Prescott, D., & Conley, Y. (2020) Predictive modelling of 12-month disability outcomes post aneurysmal subarachnoid hemorrhage. E-poster presentation, European Stroke Conference-World Stroke Conference, 11/6/2020.
22. Morris J., Clark C., Reed L, Pace D., **Cao X.**, Khanna P. (2020) Healthcare provider knowledge, attitudes, and preferences in management of Genitourinary Syndrome of Menopause (GSM) in the Mid-South. North American Menopause Society (NAMS) Virtual Annual Meeting. 9/28/2020
23. Prescott, D., **Cao, X.**, Baughman, B., & Stanfill, A. (2020). The relationship between socioenvironmental determinants of health and aneurysmal subarachnoid hemorrhage. Abstract for e-poster, 2020 State of the Science Congress on Nursing Research (CANS-SOS), online. 9/18/2020
24. Prather, J., **Cao, X.**, Prescott, D., Baughman, B., & Stanfill, A. (2020). Positive affect and well-being among subarachnoid hemorrhage patients at one-year post-stroke. 2020 Sigma Global Nursing, Region 8 Conference, Online. 9/17/2020

25. Howard S.C., Napier N., Cao X., Combs R., Watson M.L., and Lam C. (2020) Effect of access to care on outcomes of rural and elderly patients with primary central nervous system lymphoma. 2020 ASCO Virtual Scientific Program. J Clin Oncol 38: 2020 (suppl; abstr e14008).8/8/2020
26. Pounds S., **Cao X.**, Shi L., Wu H. and Cheng C. Bootstrap Evaluation of Association Matrices (BEAM): A Robust Method for Integrated Analysis of Multiple Omic Data Sets with Multiple Clinical Outcomes. JSM 2020 Online Program, 8/5/2020.
27. Pounds S., **Cao X.**, Shi L., Wu H. and Cheng C. Bootstrap Evaluation of Association Matrices (BEAM): A Robust Method for Integrated Analysis of Multiple Omic Data Sets with Multiple Clinical Outcomes. 2020 Statistical Practice in Cancer Conference. February 28-29 2020, Tampa, FL.
28. Prescott, D., **Cao, X.**, Baughman, B., & Stanfill, A. The impact of social determinants of health on 1-month outcomes post aneurysmal subarachnoid hemorrhage. International Stroke Conference 2020, February 19-21 2020, Los Angeles, CA.
29. Dhanya R, Agarwal RK, Sedai A, Kumari A, Parmar L, Hegde S, Gayathri , Gowda A, Gujjal P, Pushpa H, Ramaiah JD, Karri C, Jali S, Tallur N, Shenoy UV, Pinto D, Ramprakash S, Raghuram CP, Trivedi D, **Cao X** and Faulkner L. Assessment of Mortality and Its Associated Risk Factors in Patients with Transfusion Dependent Thalassemia in India. 61st ASH Annual Meeting and Exposition. December 9~10 2019, Orlando, FL
30. Jones, M., Burton, S., Cook, C., Lacy, A., Taylor, A., **Cao, X.**, & Day, S. (2019). Predictors of uncompleted emergency department care: Patients who leave against medical advice, Tennessee Nurses Association Conference, Memphis, TN.
31. Jerry, E., Frain, J., Marshall, S., McDaniel, E., Parnell, N., **Cao, X.**, & Day, S. (2019). A new graduate nurse residency program: Factors impacting retention, Tennessee Nurses Association Conference, Memphis, TN.
32. Elsayed AH, Wu H, **Cao X**, Raimondi SC, Downing JR, Ribeiro R, Gruber TA, Ries RE, Meshinchi S, Rubnitz J, Pounds S and Lamba JK. A 5-Gene Ara-C, Daunorubicin and Etoposide (ADE) Drug Response Score As a Prognostic Tool to Predict AML Treatment Outcome. 61st ASH Annual Meeting and Exposition. December 9~10 2019, Orlando, FL
33. Umberger, R., **Cao, X**; Harris, P; Mayr, FB. Yende, S. (Oct 2019). Role of pre-existing immunosuppressive conditions in sepsis readmissions. American College of Chest Physician's Annual Meeting in New Orleans, LA. October 19-23, 2019.
34. Pounds S. and Cao X. A Generalized Permutation Procedure to Associate Pathways with Clinical Outcomes. ENAR 2019 Spring Meeting, March 24-27 Philadelphia PA
35. Stanfill A, **Cao X**, Skolarus L, and Davis R (2019) A Nationwide Analysis of Utilization of Life-Sustaining Treatments and Discharge Disposition Following Aneurysmal Subarachnoid Hemorrhage. International Stroke Conference, Honolulu, Hawaii Feb. 6–8, 2019
36. Elsayed A, Wu H, **Cao X**, Raimondi SC, Downing JR, Ribeiro R, Gruber TA, Rubnitz JE, Pounds S and Lamba JK. Pediatric LSC3 (pLSC3) score derived from DNMT3B-CD34-GPR56 as a prognostic tool to predict AML patient outcome: results from two independent pediatric AML cohorts. 60th ASH Annual Meeting and Exposition. December 1~4 2018, San Diego, CA
37. Elsayed A, Wu H, Cao X, Ribeiro R, Rubnitz JE, Pounds S and Lamba JK. Genome Wide Association Study (GWAS) identifies SNPs associated with outcome in pediatric AML. 60th ASH Annual Meeting and Exposition. December 1~4 2018, San Diego, CA
38. Elit L, Ilbawi A, Cao X, Lam C, and Howard S. Cancer prevention and control as part of universal healthcare coverage: implications for cervical cancer for the World Health Organization 2017 country capacity survey. International Papillomavirus Conference (IPVC2018). October 2-6, 2018, Sydney, Australia.
39. Shaw TI, Pounds S, **Cao X**, Palacios G, Mason J, Perkins S, Kinney M, Kraveka J, Gross T, Sandlund J, Mullighan C, Lim M, and Leventaki V. (2018) An integrated analysis of DNA methylation and transcriptome profiles identifies two distinct groups of pediatric ALK-positive anaplastic large cell lymphoma. USCAP 107th Annual Meeting March 17-23, 2018, Vancouver, BC, Canada
40. Qian M, **Cao X**, Devidas M, Yang W, Cheng C, Carroll A, Heerema NA, Zhang H, Moriyama T, Gastier-Foster JM, Xu H, Raetz EA, Larsen E, Winick N, Bowman WP, Martin PL, Mardis ER, Fulton R, Zambetti G, Borowitz M, Wood B, Nichols KE, Carroll WL, Pui C-H, Mullighan CG, Evans WE, Hunger SP, Relling MV, Loh ML, and

- Yang JJ. TP53 Germline Variations Influence the Predisposition and Prognosis of Acute Lymphoblastic Leukemia in Children. 59th ASH Annual Meeting and Exposition. December 9~12 2017, Atlanta, GA
41. Bargal S, Rafiee R, Crews KR, **Cao X**, Rubnitz JE, Pounds S, and Lamba J. Genome-Wide Association Study (GWAS) Identifies SNPs in GPR56 and IGF1R Predictive of Leukemic Cell in Vitro cytarabine Sensitivity in Pediatric AML. 59th ASH Annual Meeting and Exposition. December 9~12 2017, Atlanta, GA
 42. Bargal S, Rafiee R, Crews KR, **Cao X**, Rubnitz JE, Pounds S, and Lamba J. Risk Score Generated from Ara-C Metabolic Pathway Predicts Leukemic Cell Intracellular Ara-CTP Levels in AML-97 Pediatric Patients. 59th ASH Annual Meeting and Exposition. December 9~12 2017, Atlanta, GA
 43. Olaya J, **Cao X**, Pounds S. R2GPU: A Very Simple R Interface for General Purpose Computing on Nvidia GPUs. useR!2017. Brussels Spain 04.07.2017-07.07.2017
 44. Alexander TB, Gu Z, Choi JK, Loh ML, Horan J, Buldini B, Basso G, Elitzur S, Zwaan CM, Haas VD, Yeoh AEJ, Reinhardt D, Tomizawa D, Lammens T, Moerloose BD, Zhou L, Hori H, Moorman AV, Moore AS, Hrusak O, Meshinchi S, Orgel E, Devidas M, Hunger SP, Auvil JMG, Smith MA, Davidsen TM, Hermida LC, Gesuwan P, Marra MA, Ma Y, Mungall AJ, Moore R, Gerhard DS, **Cao X**, Shi L, Pounds S, Inaba H and Mullighan C. Genomic Landscape of Pediatric Mixed Phenotype Acute Leukemia. 58th ASH Annual Meeting and Exposition. December 3~6 2016, San Diego, CA
 45. **Cao X**, George EO, Wang M, Armstrong DB, Cheng C, Rubnitz J, Downing J, and Pounds S. POST: a framework for set based association analysis in high dimensional genetic data. MCBIOS-XIII. March 3-5, 2016. University of Memphis, Memphis, TN.
 46. Lamba JK, Pounds S, **Cao X**, Raimondi SC, Downing JR, Ribeiro RC, and Rubnitz JE. Methylation of DNMT3B Strongly Associates with the Methylome, Cytogenetic Risk Groups, and Prognosis of Pediatric Acute Myeloid Leukemia. 57th ASH Annual Meeting and Exposition. December 5~8 2015, Orlando, FL
 47. Pounds S, **Cao X**, Raimondi SC, Downing JR, Ribeiro RC, Rubnitz JE and Lamba JK. CC-PROMISE: Projection onto the most interesting statistical evidence (PROMISE) with canonical correlation to integrate gene expression and methylation data with multiple pharmacological and clinical endpoints. iBRIGHT2015. November 1-3, 2015, The University of Texas MD Anderson Cancer Center, Houston, TX
 48. Pounds S, **Cao X**, Raimondi S, Campana D, Downing J, Ribeiro RC, Rubnitz JE and Lamba JK. The methylome of pediatric acute myeloid leukemia. 2015 ASCO Annual Meeting. May 29 - June 2, 2015; Chicago, Illinois
 49. Lamba JK, Chauhan L, Echeverri C, Korn K, Kochar K, **Cao X** and Pounds S. High-Throughput, High-Content siRNA/Drug Modifier Screen for Validation of Transcriptional Profiles Predictive of Cytarabine Response in AML. 56th ASH Annual Meeting and Exposition. December 6~9 2014, San Francisco, CA
 50. Karol SE, Coustan-Smith E, **Cao X**, Shurtleff SA, Raimondi SC, Choi JK, Ribeiro RC, Dahl GV, Bowman WP, Taub JW, Degar B, Leung W, Downing JR, Pui CH, Rubnitz JE, Campana D, Inaba H. Prognostic Factors for Children with Acute Myeloid Leukemia Who Achieve Minimal Residual Disease-Negative Status after Induction Therapy. 55th ASH Annual Meeting and Exposition. December 7~10 2013, New Orleans, LA
 51. Lamba JK, Pounds S, **Cao X**, Crews K, Raimondi S, Campana D, Baker SD, Ribeiro RC, Rubnitz JE. Genetic variations in cytarabine pathway genes as determinants of outcome in acute myeloid leukemia. ASCO Annual Meeting. May 31-June 4, 2013, Chicago IL
 52. Yang JJ, Cheng C, Meenakshi D, **Cao X**, Campana D, Yang W, Fan Y, Neale GAM, Cox N, Scheet P, Borowitz MJ, Winick N, Martin PL, Bowman WP, Camitta B, Reaman G, Carroll WL, Willman CL, Hunger SP, Evans WE, Pui CH, Loh ML, and Relling MV. Genome-Wide Association Study Identifies Germline Polymorphisms Associated with Relapse of Childhood Acute Lymphoblastic Leukemia. 54th ASH Annual Meeting and Exposition. December 8~11 2012, Atlanta, GA
 53. Lamba JK, Pounds S, **Cao X**, Crews K, Campana D, Downing JR, Ribeiro R, and Rubnitz JE. Cytarabine-Induced Gene Expression Signatures in AML Patients and Its Association with Clinical Outcome. 54th ASH Annual Meeting and Exposition. December 8~11 2012, Atlanta, GA
 54. Lamba JK, Mitra A, Crews K, Pounds S, **Cao X**, Gandhi V, Plunkett W, Rubnitz JE and Ribeiro RC. Pathway Based Pharmacogenomics of Cytarabine in Pediatric Acute Myeloid Leukemia. 52nd ASH Annual Meeting and Exposition. December 4~7 2010, Orlando FL.
 55. Lamba JK, Crews K, Pounds S, **Cao X**, Gandhi V, Plunkett W, Baker SD, Pui CH, Campana D, Downing JR, Rubnitz JE and Ribeiro RC. Gene Expression Patterns Associated with Cytarabine Pharmacology and Outcome in Pediatric Acute Myeloid Leukemia. 51st ASH Annual Meeting and Exposition. December 5 ~ 8 2009, New Orleans, LA.

56. Rubnitz JE, Inaba H, Dahl G, Bowman WP, Taub J, Pui C-H, Pounds S, Lacayo NJ, **Cao X**, Ribeiro RC, Meshinchi S, Degar B, Airewele G, Onciu M, Coustan-Smith E, Campana D. Minimal Residual Disease–Directed Therapy for Childhood Acute Myeloid Leukemia: Results of the AML02 Multicenter Trial. *51st ASH Annual Meeting and Exposition*. December 5 ~ 8 2009, New Orleans, LA.
57. Lamba JK, Mitra A, Crews K, Pounds S, **Cao X**, Gandhi V, Plunkett W, Rubnitz JE and Ribeiro RC. 5'Nucleotidase (NT5C2) Genotype Influences Leukemic Blast Concentration of Ara-CTP in Pediatric Patients with Acute Myeloid Leukemia. *51st ASH Annual Meeting and Exposition*. December 5 ~ 8 2009, New Orleans, LA.
58. Lamba JK, Crews K, Pounds S, **Cao X**, Baker SD, Gandhi V, Plunkett W, Downing JR, Rubnitz JE and Ribeiro RC. Gene Expression Profiling of Acute Myeloid Leukemia Shows Therapeutically Meaningful Patterns of Association with Ara-CTP Pharmacokinetics and Pharmacodynamics. *50th ASH Annual Meeting and Exposition*. December 6 ~ 9, 2008, San Francisco, CA.
59. Yang JJ, Yang W, Cheng C, Meenakshi D, **Cao X**, Campana D, Borowitz MJ, Willman CL, Bowman WP, Reaman G, Carroll WL, Hunger SP, Evans WE, Pui CH and Relling MV. Genetically Defined Racial Differences Underlie Risk of Relapse in Childhood Acute Lymphoblastic Leukemia. *50th ASH Annual Meeting and Exposition*. December 6 ~ 9 2008, San Francisco, CA.
60. Becraft PW, **Cao X** Chettoor A. The COP9 signalsome is involved in ACR4 receptor turnover. *Plant Biology 2007*: July 7 - July 12, 2007, Chicago, Illinois, USA
61. Chettoor A, Li K, **Cao X** and Becraft PW. The COP9 signalsome is involved in ACR4 receptor turnover. *Midwest ASPB Meeting*. March 24-25, 2007. Michigan State University, East Lansing, MI
62. Becraft PW, Costa LM, Dey N, Perez P, Gutierrez-Marcos JF, **Cao X**, McCarty DR, Biderre-Petit C, Khbaya B. Transcriptional regulation of the maize *Viviparous 1 (Vp1)* gene. *Plant Biology 2005*: July 16 - July 20, 2005, Seattle, Washington, USA
63. **Cao X***, Dey N, Perez P, McCarty DR, Becraft PW. Transcriptional regulation of the maize vp1 gene. *47th Annual Maize Genetics Conference*. March 10-13, 2005. Grand Geneva Resort Lake Geneva, Wisconsin.
64. **Cao X**, Asuncion-Crabb Y, Sandal L and Becraft PW. Analysis of CRINKLY4-like Receptor Kinase genes in *Arabidopsis*. *12th International conference on Arabidopsis Research*. June 23-27, 2001. University of Wisconsin Madison.
65. **Cao X**, Su Y and Lu D (1998). Studies on transfer of two genes into Alfalfa by *Agrobacterium Rhizogenes*. *Abstracts of Eighteenth International Congress of Genetics*. pp: 160
66. Lu D, Wang Q, **Cao X**, et al. (1996) Transfer of a gene encoding proteins containing richness of sulphur amino acids into Alfalfa and Birdfoot Trefoil. *Abstracts of 2nd- Pacific Conference on Plant Cell and Tissue Culture* pp: 116

BOOK CHAPTERS

1. **Cao X**., Elsayed, A. H., Pounds, S. B. Statistical Methods Inspired by Challenges in Pediatric Cancer Multi-omics. (2023). *Statistical Genomics. Methods in molecular biology* (Clifton, N.J.). (vol. 2629, pp. 349-373). PMID: 36929085

PEER REVIEWED PUBLICATIONS:

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SOFTWARE DEVELOPMENT:

CRAN:

GSDA:

<https://cran.r-project.org/web/packages/GSDA/index.html>

Bioconductor:

PROMISE:

<http://www.bioconductor.org/packages/release/bioc/html/PROMISE.html>

CCPROMIE:

<https://bioconductor.org/packages/devel/bioc/html/CCPROMIE.html>

POST:

<https://bioconductor.org/packages/release/bioc/html/POST.html>

GitHub:

CCPROMIE:

<https://github.com/xueyuancao/CCPROMIE>

POST:

<https://github.com/xueyuancao/POST>

GSDA:

<https://github.com/xueyuancao/GSDA>

ezADR:

<https://github.com/xueyuancao/ezADI>