

CURRICULUM VITAE ~ Chi Wang

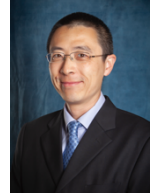
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Date Prepared: May 15, 2025

CURRICULUM VITAE

Chi Wang, PhD
Professor, with tenure, Regular Title Series
Department of Internal Medicine
Division of Cancer Biostatistics
University of Kentucky College of Medicine



I. GENERAL INFORMATION

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Personal Website <http://sweb.uky.edu/~cwa236/>

II. EDUCATION

Undergraduate [oldest at top, newest at bottom]

09/1997-06/2001 **Peking University**
Beijing, China
BS, Statistics

Professional/Graduate [oldest at top, newest at bottom]

09/2001-06/2003 **Peking University**
Beijing, China
MS, Statistics

09/2004-12/2009 **Johns Hopkins Bloomberg School of Public Health**
Baltimore, MD, USA
PhD, Biostatistics

III. PROFESSIONAL EXPERIENCES [oldest at top, newest at bottom]

2023-present Co-founder, SCCIGENIX, Inc, Lexington, KY.

IV. ACADEMIC APPOINTMENTS [specify tenure/non-tenure track, academic/non-academic, full-time or part-time]

Faculty [oldest at top, newest at bottom]

	University of California, Riverside Riverside, CA
07/2009-06/2010	Assistant Professor, Department of Statistics, tenure-track, full-time
	University of Kentucky Lexington, KY
07/2010-06/2016	Assistant Professor, Division of Cancer Biostatistics, Department of Biostatistics, College of Public Health and Biostatistics and Bioinformatics Shared Resource Facility, Markey Cancer Center, Regular Title Series, tenure-track, full-time
07/2016-12/2019	Associate Professor, Division of Cancer Biostatistics, Department of Biostatistics, College of Public Health and Biostatistics and Bioinformatics Shared Resource Facility, Markey Cancer Center, Regular Title Series, with tenure, full-time
01/2020-06/2022	Associate Professor, Division of Cancer Biostatistics, Department of Internal Medicine, College of Medicine and Biostatistics and Bioinformatics Shared Resource Facility, Markey Cancer Center, Regular Title Series, with tenure, full-time
05/2021-06/2022	Associate Professor, Department of Statistics, College of Arts and Sciences, Joint (Secondary) Appointment
07/2017-	Assistant Director for Bioinformatics, Biostatistics and Bioinformatics Shared Resource Facility, Markey Cancer Center, full-time
07/2022-	Professor, Division of Cancer Biostatistics, Department of Internal Medicine, College of Medicine and Biostatistics and Bioinformatics Shared Resource Facility, Markey Cancer Center, Regular Title Series, with tenure, full-time
07/2022-	Professor, Department of Statistics, College of Arts and Sciences, Joint (Secondary) Appointment

V. HOSPITAL or CLINICAL APPOINTMENTS [oldest at top, newest at bottom; specify full-time or part-time]

Not applicable.

VI. CONSULTING ACTIVITIES [oldest at top, newest at bottom in each section]

Not applicable.

VII. TEACHING ACTIVITIES [oldest at top, newest at bottom in each section; use for students, residents, fellows, continuing education programs]

University Faculty

Course Instructor

I was the instructor of the following courses. For most courses, I prepared course materials, gave a series of lectures throughout the semester, made and graded homework and exams.

Particularly, I have developed a new course “Sequencing Data Analysis” on introducing state-of-the-art statistical and bioinformatics methods for next-generation sequencing data analysis, and have taught the course twice.

University of California, Riverside

Riverside, CA

09/2009-12/2009

Probability and Statistics for Science and Engineering [STAT 155]

This is an introductory course for undergraduate students from science and engineering departments. It covers basic probability and statistics concepts and methods with an emphasis on techniques and applications that are useful in engineering, computer science, and the physical sciences.

01/2010-03/2010

Discrete Data Analysis [STAT 205]

This course is designed for PhD students from Department of Statistics to introduce statistical theory and methods for categorical data analysis.

03/2009-05/2010

General Statistical Models [STAT 171]

This course is designed for MS students from Department of Statistics to provide an applied introduction of statistical methods for categorical data analysis.

University of Kentucky

Lexington, KY

01/2012-05/2012

Biometrics II [BST 676]

This course, the second of a two-semester sequence in biometrics, is designed for students in the joint Epi-Bio PhD program. It develops numerous techniques for constructing and rigorously evaluating point estimators, hypothesis testing procedures, and interval estimators.

01/2013-05/2013

Biometrics II [BST 676]

01/2014-05/2014

Biostatistics I [CPH 580]

This course, the first of a two-semester sequence in biostatistics, is an introductory course for graduate students from various colleges. It covers basic statistics concepts and methods used in medicine, public health, and the biological sciences. It also demonstrates using SAS to perform basic statistical analysis.

01/2015-05/2015

Biostatistics I [CPH 580]

08/2016-12/2016

Doctoral Seminar [CPH 786]

This course is designed for PhD students from Department of Biostatistics to enhance their research ability. Students are required to read research

- articles, give presentations, participate in paper discussions, and attend colloquium sessions
- 01/2017-05/2017 Sequencing Data Analysis [CPH 738-001]
This is *a new course that I developed* for graduate students from various colleges. It introduces state-of-the-art statistical and computational methods for processing and analyzing genomic data generated by next generation sequencing, and provides hands-on genomic data analysis experience.
- 01/2018-05/2018 Doctoral Seminar [CPH 786]
- 01/2019-05/2019 Sequencing Data Analysis [CPH 738-002/STA715-005]

Guest Lectures

I was invited to give guest lectures (1 to 1.5 hours each) for the following courses from various departments in College of Medicine and College of Public Health.

- University of Kentucky**
Lexington, KY
- 04/2013 Biology and Therapy of Cancer [MI/MED/PHA 616, topic: Cancer Biostatistics for Basic and Translational Research]
- 09/2013 Drug Discovery, Development, and Translation [PHS 760, topic: Bioinformatics for Translational Discoveries and Targeted Clinical Studies]
- 10/2013 Practical Statistics [IBS 611, topic: Bioinformatics I & II]
- 11/2013 Introduction to Bioinformatics [CPH 738-007, topic: Next-Generation Sequencing]
- 04/2014 Introduction to Bioinformatics [CPH 738-007, topic: Next-Generation Sequencing]
- 12/2014 Practical Statistics [IBS 611, topic: Introduction to Bioinformatics]
- 09/2015 The 3rd annual Markey Cancer Center Clinical Trials Boot Camp [topic: Bioinformatics for NGS data @ Biostatistics and Bioinformatics Shared Resource Facility]
- 04/2017 Introduction to Bioinformatics [BMI 633, topic: Next-Generation Sequencing]
- 08/2017 2017 Markey Cancer Center Clinical Trials Boot Camp [topic: Genomics and Bioinformatics in Clinical Studies]
- 12/2017 Introduction to Bioinformatics [BMI 633, topic: Next-Generation Sequencing]
- 03/2019 Introduction to biomedical image informatics [BMI 734, topic: Cancer Somatic Mutation Analysis based on Next Generation Sequencing]
- 03/2019 Introduction to biomedical image informatics [BMI 734, topic: Cancer Somatic Mutation Analysis based on Next Generation Sequencing]
- 02/2020 Introduction to Bioinformatics [BMI 633, topic: Cancer Somatic Mutation Analysis based on Next Generation Sequencing]
- 10/2020 Instrumental Techniques In Forensic Chemistry [TOX 920, topic: Basic Probability and Statistics Review]

10/2020 Forensic and Analytical DNA [TOX 910, topic: Basic Probability and Statistics Review]
11/2020 Introduction to Bioinformatics [BMI 633, topic: Cancer Genomics --- with A Focus on Somatic Mutation Analysis]
04/2021 Introduction to Bioinformatics [BMI 633, topic: Cancer Genomics --- with A Focus on Somatic Mutation Analysis]
10/2021 Forensic and Analytical DNA [TOX 910, topic: Basic Probability and Statistics Review]
12/2021 Introduction to Bioinformatics [BMI 633, topic: Cancer Genomics --- with A Focus on Somatic Mutation Analysis]
10/2022 Forensic and Analytical DNA [TOX 910, topic: Basic Probability and Statistics Review]
10/2023 Forensic and Analytical DNA [TOX 910, topic: Basic Probability and Statistics Review]
10/2024 Forensic and Analytical DNA [TOX 910, topic: Basic Probability and Statistics Review]

Professional Course/Program Faculty

**American College of Clinical Pharmacy (ACCP) Foundation
Mentored Research Investigator Training (MeRIT) program
Lexington, KY**

06/2019 Basic Statistics Review

VIII. ADVISING ACTIVITIES [oldest at top, newest at bottom in each section]

Advisor/Co-Advisor

I have served as advisor/co-advisor for the following PhD students from University of Kentucky. Many of those students have already graduated. During the entire period of time that a student worked on the dissertation, I spent *one to three hours per week* with the student to have a one-to-one meeting, provide guidance on research topic selection, literature review, statistical methods derivation, simulation studies and real data analyses, encourage participation and presentation in conferences, and revise manuscripts and dissertation.

Supervision time period	Role	Student's name	Department	Position after graduation
06/2013-07/2016	Co-Advisor	Hong Wang*	Statistics	Sanofi
06/2015-07/2020	Co-Advisor	Li Xu	Statistics	Wells Fargo
06/2016-07/2019	Advisor	Zhengyan Huang	Biostatistics	Everest Clinical Research
06/2016-07/2020	Co-Advisor	Tingting Zhai	Statistics	Novartis
06/2016-07/2020	Co-Advisor	Xu Zhang	Statistics	Gilead Sciences
06/2018-05/2022	Co-Advisor	Tiantian Zeng	Statistics	Merck
06/2016-05/2023	Co-Advisor	Menghan Wang	Statistics	
06/2020-06/2024	Advisor	Kun Liu**	Statistics	Medpace
06/2022-present	Advisor	Shouyi Liang	Statistics	
06/2022-present	Advisor	Ruiyi Jiang	Statistics	

* Winner of the ENAR 2016 Distinguished Student Paper Award

** Winner of the ASA Kentucky Chapter Spring Meeting 2024 Student Presentation Award

Dissertation Committee Member

I have served as a member on dissertation committees for students from a variety of departments at the University of Kentucky, where I joined the committees at either early or late stage of students' dissertation development depending on their needs. My duties include attending committee meetings and final defense and providing statistical advice on students' dissertation works.

Time period	Student's name	Department	Degree
01/2011-11/2011	Zhenyu Huang	Biostatistics	MS
03/2012-10/2013	Yin Hu	Computer Science	PhD
01/2014-06/2014	Jinpeng Liu	Computer Science	MS

11/2014-12/2014	Yan Huang	Computer Science	PhD
01/2015-11/2016	Hongyuan Wang	Statistics	PhD
06/2015-07/2015	Adam Parrish	Communication	PhD
09/2017-11/2018	Jin Xie	Statistics	PhD
09/2017-05/2019	Chenlu Ke	Statistics	PhD
09/2017-03/2018	Xinan Liu	Computer Science	PhD
09/2017-04/2021	Fan Chen	Toxicology and Cancer Biology	PhD
02/2018-05/2018	Xiaoli Kong	Statistics	PhD
08/2018-02/2020	Yuntong Li	Statistics	PhD
10/2018-07/2020	Yue Cui	Statistics	PhD
11/2018-05/2020	Xue Ding	Statistics	PhD
01/2019-10/2021	Xiaofei Zhang	Computer Science	PhD
03/2019-08/2019	Eugene Hinderer	Molecular & Cellular Biochemistry	PhD
05/2019-06/2019	Yi Zhang	Computer Science	PhD
06/2019-11/2020	Aisaku Nakamura	Statistics	PhD
08/2019-10/2020	Matthew Rutledge	Statistics	PhD
08/2019-05/2021	Pei Wang	Statistics	PhD
11/2019-05/2021	Jinpeng Liu	Computer Science	PhD
02/2020-09/2020	Ting Zeng	Statistics	PhD
03/2020-09/2021	Justin Wayne Gorski	CCTS	PhD
04/2020-05/2023	Sheng Yuan	Statistics	PhD
10/2020-05/2023	Nan Lin	Pharmacy	PharmD
04/2021-04/2022	Leon Su	Statistics	PhD
10/2021-11/2023	Percy Yeh	Statistics	PhD
08/2021-04/2023	Brien Washington	Medical Physics	PhD
04/2023-03/2024	Jiyeon Park	Statistics	PhD
03/2023-06/2023	Yanxi Li	Statistics	PhD
04/2023-01/2024	Lee Park	Statistics	PhD
07/2024-present	Josh Misa	Medical Physics	PhD

IX. ADMINISTRATIVE ACTIVITIES & UNIVERSITY SERVICE [oldest at top, newest at bottom in each section]

College

University of Kentucky
Lexington, KY

Administration & Clinical Operations

07/2015-06/2016 Member, College of Public Health Faculty Council

Education & Research

07/2011-06/2014 Member, College of Public Health MPH Admissions Committee

07/2011-06/2013 Member, College of Public Health Joint PHD Program Qualify Exam Committee

07/2017-06/2019 Member, College of Public Health Research Committee

Medical Center

Markey Cancer Center
Lexington, KY

Administration & Clinical Operations

07/2017-present Assistant Director for Bioinformatics, Biostatistics and Bioinformatics Shared Resource Facility

Education & Research

07/2017-present Member, Biospecimen Procurement and Translational Pathology Shared Resource Facility Scientific Advisory Committee

10/2017-05/2019 Member, Oncogenomics Shared Resource Facility Scientific Advisory Committee

06/2019-present Chair, Oncogenomics Shared Resource Facility Scientific Advisory Committee

10/2020-05/2021 Member, Committee for External Genomics Vendor, Oncogenomics Shared Resource Facility

X. SPECIAL ASSIGNMENTS

Not applicable.

XI. HONORS & AWARDS [specify nature/meaning of each; academic, professional, honorary, not grants; oldest at top, newest at bottom]

10/2000 First Prize, the National College Mathematics Contest in Modeling, China
09/2000 Bao Jie Scholarship, Peking University, Beijing, China
09/2001 Second Prize, the 9th Challenge Cup Contest of Peking University, Beijing, China
09/2002 An Tai Scholarship, Peking University, Beijing, China
09/2004-06/2009 Graduate Scholarships, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD
02/2008 Distinguished Student Paper Award, International Biometric Society Eastern North American Region (ENAR)
06/2010 Member of the Delta Omega Alpha Chapter
06/2010 Member of the Phi Beta Kappa Society

XII. PROFESSIONAL ACTIVITIES, PUBLIC SERVICE & PROFESSIONAL DEVELOPMENT [oldest at top, newest at bottom in each section]

Memberships

10/2022-present American Statistical Association

Review Panels

National Science Foundation

03/2013-04/2014 Reviewer, Methodology, Measurement, and Statistics (MMS) Program

Oncology Research Information Exchange Network (ORIEN)

12/2018-12/2019 Member (Biostatistician reviewer), ORIEN Scientific Review Committee

05/2021-05/2023 Member (Biostatistician reviewer), ORIEN Scientific Review Committee

National Cancer Institute

06/2017-06/2017 Reviewer, Special Emphasis Panel focus on Clinical & Translational R21 & Omnibus R03: ZCA1 TCRB-J (O1)

04/2018-04/2018 Reviewer, Special Emphasis Panel focus on Clinical and Translational Exploratory/Developmental Studies ZCA1 TCRB-J (M1) S

07/2019-07/2019 Reviewer, Special Emphasis Panel on Collaborative Research at the NIH Clinical Center ZCA1 TCRB-J (O3)

10/2021-10/2021 Reviewer, NCI SPORE (P50) Review II ZCA1RPRB-6 (J1)

03/2022-03/2022 Reviewer, NCI Pancreatic Cancer Detection Consortium (U01/U24) Review ZCA1 RPRB-8 (M2)

10/2022-10/2022 Reviewer, NCI SPORE (P50) Review II ZCA1RPRB-L (J1)

02/2024-02/2024 Reviewer, NCI Program Project (P01) Review ZCA1 RPRB-L (M1)

07/2024-07/2024 Reviewer, NIGMS Maximizing Investigators Research Award (MIRA) Review ZRG1 MBBC-F(55)

10/2024-10/2024 Reviewer, NCI ITCR Program U01 Review 2025/01 ZCA1 TCRB-9 (J1) R

04/2025-04/2025 Reviewer, NCI ITCR Program U01/U24 Review 2025/05 ZCA1 TCRB-9 (M1)

American Heart Association Institute for Precision Cardiovascular Medicine

10/2019-09/2021 Member, Data Science Study Section

07/2020-12/2020 Reviewer, AHA COVID-19 Data Challenge phases I and II

New Jersey Commission on Cancer Research

04/2024-04/2024 Reviewer, Post-doctoral Fellowship Grant

Internal grant reviews

University of Kentucky

12/2011 Kentucky Lung Cancer Research Program

05/2013 American Cancer Society Institutional Research Grant

12/2013	American Cancer Society Institutional Research Grant
01/2014	Kentucky Lung Cancer Research Program
08/2014	American Cancer Society Institutional Research Grant
12/2014	American Cancer Society Institutional Research Grant
11/2015	Markey Cancer Center Cancer Center Support Grant Pilot Program
12/2015	Kentucky Lung Cancer Research Program
08/2016	American Cancer Society Institutional Research Grant
06/2017	American Cancer Society Institutional Research Grant
06/2017	Center for Clinical and Translational Science Pilot and Innovation Research Program
11/2017	Peter and Carmen Lucia Buck Clinical Translational Research Award
03/2018	American Cancer Society Institutional Research Grant
06/2018	American Cancer Society Institutional Research Grant
12/2018	American Cancer Society Institutional Research Grant
01/2019	Markey Cancer Center Cancer ORIEN Award
05/2019	American Cancer Society Institutional Research Grant
10/2019	Markey Cancer Center Cancer Center Support Grant Pilot Program
12/2019	Center for Clinical and Translational Science Pilot and Innovation Research Program
03/2020	American Cancer Society Institutional Research Grant
05/2020	Markey Cancer Center Cancer Center Support Grant Pilot Program
09/2020	American Cancer Society Institutional Research Grant
03/2021	American Cancer Society Institutional Research Grant
03/2022	American Cancer Society Institutional Research Grant
05/2023	Markey Cancer Center Cancer Center Support Grant Pilot Program
10/2023	American Cancer Society Institutional Research Grant
02/2024	Center for Clinical and Translational Science Pilot and Innovation Research Program
07/2024	Markey Cancer Center Cancer Center & Radiation Medicine Pilot Program
05/2024	Markey Cancer Center Cancer Center Support Grant Pilot Program
07/2024	Markey Cancer Center Cancer Center & SUPRA Research Collaborative Pilot Program
03/2025	Center for Cancer and Metabolism COBRE Pilot Program

Professional Service

05/2023-10/2024	Co-Chair, ORIEN Data Science Symposium Planning Committee
11/2022-present	Secretary, American Statistical Association Kentucky Chapter

Editorial Boards

06/2014-present	Biometrics & Biostatistics International Journal, MedCrave network
07/2014-present	Journal of Biometrics & Biostatistics, Hilaris

Journal Peer-Reviewing

03/2008-06/2018	Statistica Sinica
03/2010-04/2019	BMC Bioinformatics
06/2010-04/2025	PLoS ONE
06/2011-01/2012	The International Journal of Biostatistics
06/2011-06/2011	Journal of Classification
06/2011-08/2017	Statistical Applications in Genetics and Molecular Biology
10/2011-02/2024	Statistics in Medicine
01/2012-05/2015	Journal of Causal Inference
02/2012-04/2012	Journal of Statistical Planning and Inference
04/2012-04/2012	BMC Genomics
01/2013-01/2013	Journal of Biopharmaceutical Statistics
02/2013-02/2013	International Journal of Computational Biology and Drug Design
02/2013-04/2013	Computational Statistics and Data Analysis
03/2013-03/2013	Computational Biology and Chemistry
12/2014-06/2016	Biometrics & Biostatistics International Journal
04/2014-09/2017	Scientific Reports
01/2015-06/2018	Annals of Applied Statistics
06/2016-03/2020	Bayesian Analysis
07/2016-03/2017	Canadian Journal of Statistics
07/2016-10/2018	Briefings in Functional Genomics
07/2017-01/2024	Bioinformatics
07/2017-10/2018	Journal of the American Statistical Association
11/2018-09/2019	Cancer Medicine
04/2020-04/2020	Nucleic Acids Research
09/2020-11/2021	American Journal of Epidemiology
12/2021-12/2021	Journal of the Royal Statistical Society: Series C
02/2022-02/2022	Scandinavian Journal of Statistics
08/2023-10/2023	Cancer Research
07/2024-08/2024	iScience

Professional Development

03/2024-05/2024	Completed the Leadership Grow Program at University of Kentucky HealthCare
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XIII. SPEAKING ENGAGEMENTS [Invited lectureships, panel sessions; oldest at top, newest at bottom in each section]

Local

University of California, Los Angeles

Los Angeles, CA

03/2010 Department of Statistics: “Exponential Tilt Models for Time-to-Event Outcomes”

University of Louisville

Louisville, KY

02/2016 Department of Bioinformatics and Biostatistics: “Estimation of the Average Causal Effect while Accounting for Uncertainty in Confounder and Effect Modifier Selection”

11/2018 Department of Bioinformatics and Biostatistics: “Differential Abundance Analysis for Proteomic and Metabolomic Data”

Peking University

Beijing, China

05/2017 Department of Statistics: “Causal effect estimation while accounting for uncertainty in confounder and effect modifier selection”

Jilin University

Changchun, Jilin, China

06/2017 Translational Medical Science Institute, The First Bethune Hospital of Jilin University: “Bioinformatics Methods for Cancer ‘Omics Studies”

06/2017 Department of Statistics: “NanoStringDiff: A Novel Statistical Method for Differential Expression Analysis Based on NanoString nCounter Data”

01/2023 Virtual seminar: “Cancer Genomics---with a Focus on Somatic Mutation Analysis”

University of Kentucky

Lexington, KY

02/2018 Markey Research Seminar: “Probabilistic and Statistical Modeling for Cancer Omics Data”

03/2021 Department of Statistics: “Statistical Methods for Complex Cancer Data”

08/2023 CCTS BERD Bites Learning Series: “Introduction to Cancer Somatic Mutation Analyses”

University of Pittsburgh

Pittsburgh, PA

03/2022 Hillman Cancer Center “Statistical Methods for Cancer Omics Data”

Beijing Technology and Business University

Beijing, China

06/2024 School of Mathematics and Statistics: “A Probabilistic Method for Estimating the Temporal Order of Mutations During Carcinogenesis”

State/Regional

21st Century Cures

Knoxville, TN

03/2018 Southeast Conference, Using Big Data to Overcome Health Disparities: “Mutational Characterization of Squamous Cell Lung Cancers from Appalachian Kentucky: Moving Closer to Personalized Treatment”

University of Kentucky

Lexington, KY

03/2013 Inaugural Breast Cancer Symposium: “Bioinformatics Support from MCC’s Biostatistics Shared Resource Facility (BSRF)”

03/2015 10th Annual CCTS Spring Conference: “Statistical and Bioinformatics Methods for Genomic Data Analysis”

03/2016 4th Annual Breast Cancer Symposium: “Bioinformatics Data Processing and Analysis”

03/2017 5th Annual Breast Cancer Symposium: “Bioinformatics methods for breast cancer genomic data”

10/2018 2nd Commonwealth Computational Summit: “Bioinformatics Methods for Next Generation Sequencing-Based Cancer Studies”

Southern Regional Council on Statistics

Carrollton, KY

06/2019 Southern Regional Council on Statistics 2019 Conference: “Statistical Methods for Cancer Somatic Mutation Analysis”

National/International

The Ohio State University

Columbus, OH

11/2019 Mathematical Biosciences Institute Workshop on Evolutionary Dynamics in Cancer: “A probabilistic method to estimate the temporal order of pathway mutations during carcinogenesis by leveraging intra-tumor phylogenies and functional annotations”

International Chinese Statistical Association

virtual conference

12/2020 ICSA 2020 Applied Statistics Symposium: “A Statistical Framework for Genome-Scale Mutual Exclusivity Analysis of Cancer Mutations”

Oncology Research Information Exchange Network (ORIEN)

Tampa, FL

03/2022 3rd Annual ORIEN Scientific Retreat: “Radiogenomics Consortium and Biomarker Development for Non-Small Cell Lung Cancer (NSCLC) Patients”

**NIH/NCI Informatics Technology for Cancer Research (ITCR)
Program**

09/2024

Indianapolis, IN

ITCR Annual Meeting: “Estimating the Distribution of Ratio of Paired
Event Times in Phase II Oncology Trials”

**MidSouth Computational Biology and Bioinformatics Society
(MCBIOS)**

03/2025

Salt Lake City, UT

MCBIOS 2025 Conference: “Discriminative Feature Selection for Single-
Cell RNAseq Cell Clustering”

XIV. RESEARCH & INTELLECTUAL CONTRIBUTIONS

A. PUBLICATIONS [oldest at top, newest at bottom in each section; number each within each section; published or accepted for publication/in press; NOT in preparation]

Statistical and Bioinformatics Methodological Papers

(*: corresponding or co-corresponding author, †: student/GRA)

1. Yang J, **Wang C** and Yang Y. The grouping of DNA sequences model. *Journal of Mathematics in Practice and Theory* 31(1):31-38, 2001. (in Chinese)
2. Geng Z, **Wang C** and Zhao Q. Decomposing a moral graph to search for v-structures. *Journal of Multivariate Analysis* 96(2): 282-294, 2005.
3. Dominici F, **Wang C**, Crainiceanu C and Parmigiani P. Model selection and health effect estimation in environmental epidemiology. *Epidemiology* 19:558-560, 2008.
4. Irizarry RA, **Wang C**, Zhou Y and Speed TP. Gene set enrichment analysis made simple. *Statistical Methods in Medical Research* 18:565–575, 2009.
5. Chen S, **Wang C**, Caffo BS, Eberly LE and Schwartz BS. Adaptive control of the false discovery rate in voxel-based morphometry. *Human Brain Mapping* 30:2304-2311, 2009.
6. **Wang C**^{*}, Tan Z and Louis TA. exponential tilt models in the presence of censoring. *Journal of Statistical Planning and Inference* 141:1102-17, 2011.
7. **Wang C**^{*}, Parmigiani G and Dominici F. Bayesian effect estimation accounting for adjustment uncertainty (with discussion). *Biometrics*, 68(3): 661-86, 2012.
8. Wu H[†], **Wang C**[‡] and Wu Z. A new shrinkage estimator for dispersion improves differential expression detection in RNA-seq. *Biostatistics*, 14(2): 232-43, 2013. ‡Authors with equal contribution.
9. **Wang C**^{*}, Tan Z and Louis TA. An exponential tilt mixture model for time-to-event data to evaluate treatment effect heterogeneity in randomized clinical trials. *Biometrics & Biostatistics International Journal*, 1(2):00006, 2014.
10. **Wang C**^{*}, Tan Z and Louis TA. An exponential tilt model for quantitative trait loci mapping with time-to-event data. *Journal of Bioinformatics Research Studies*, 1(2):2, 2014.
11. Tian S, Chang HH, **Wang C**, Jiang J, Wang X and Niu J. Multi-TGDR, a multi-class regularization method, identifies the metabolic profiles of hepatocellular carcinoma and cirrhosis infected with hepatitis B or hepatitis C virus, *BMC Bioinformatics*, 15:97, 2014.
12. Tian S, **Wang C** and An MW. Test on existence of histology subtype-specific prognostic signatures among early stage lung adenocarcinoma and squamous cell carcinoma patients using a Cox-model based filter. *Biology Direct*, 10:15, 2015.
13. **Wang C**^{*}, Dominici F, Parmigiani G and Zigler CM. Accounting for uncertainty in confounder and effect modifier selection when estimating average causal effects in generalized linear Models. *Biometrics*, 71(3):654-65, 2015.
14. Chen L, **Wang C**, Qin ZS and Wu H. A novel statistical method for quantitative comparison of multiple ChIP-seq datasets. *Bioinformatics*, 31(12):1889-96, 2015.
15. Wu H, **Wang C** and Wu Z. PROPER: Comprehensive power evaluation for differential expression using RNA-seq. *Bioinformatics*, 31(2):233-41, 2015.
16. Wang H[†], Horbinski C, Wu H, Liu Y, Sheng S, Liu J, Weiss H, Stromberg A, **Wang C**^{*}. NanoStringDiff: A novel statistical method for differential expression analysis based on NanoString nCounter data. *Nucleic Acids Research*, 44(20): e151, 2016.

17. **Wang C**, Liu J and Fardo DW. Causal effect estimation in sequencing studies: A Bayesian method to account for confounder adjustment uncertainty. *BMC Proceedings*, 10(7): 411-415, 2016.
18. Tian S, Chang HH, **Wang C**. Weighted SAMGSR: combining significance analysis of microarray-gene set reduction algorithm with pathway topology-based weights to select relevant genes, *Biology Direct*, 11(1):50, 2016.
19. Tian S, **Wang C**, Chang HH, Sun J. Identification of prognostic genes and gene sets for early-stage nonsmall cell lung cancer using bi-level selection methods. *Scientific Reports*, 7:46164, 2017.
20. Huang Z[†], Chen L and **Wang C***. Classifying lung adenocarcinoma and squamous cell carcinoma using RNA-Seq Data. *Cancer Studies and Molecular Medicine*. 2017 Sep; Volume 3: Issue 2.
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XIV. RESEARCH & INTELLECTUAL CONTRIBUTIONS - *continued*

B. ABSTRACT PRESENTATIONS [specify type: Podium, Poster, Exhibit, Electronic, Educational Exhibit, Scientific Exhibit; oldest at top, newest at bottom in each section]

Local/State/Regional Meetings

1. 03/2007. **Wang C**, Z Tan and T Louis. Exponential Tilt Models in the presence of Censoring. International Biometric Society Eastern North American Region (ENAR) Spring Meeting. Atlanta, Georgia.
2. 03/2008. **Wang C**, F Dominici and G Parmigiani. A Bayesian Approach to Effect Estimation Accounting for Adjustment Uncertainty. International Biometric Society Eastern North American Region (ENAR) Spring Meeting. Arlington, Virginia. **Distinguished Student Paper Award**.
3. 03/2015. **Wang C**, F Dominici, G Parmigiani and C Zigler. Accounting for Uncertainty in Confounder Selection when Estimating Average Causal Effects in Generalized Linear Models. International Biometric Society Eastern North American Region (ENAR) Spring Meeting. Miami, Florida.

National/International

1. 08/2008. **Wang C**, Z Tan and T Louis. Exponential Tilt Models in the presence of Censoring. American Statistical Association Joint Statistical Meetings. Denver, CO.
2. 10/2014. **Wang C**, F Dominici and G Parmigiani. Bayesian Estimation of Average Causal Effect with Adjustment for Confounding. 3rd International Conference & Exhibition on Biometrics & Biostatistics. Baltimore, MD.
3. 08/2016. **Wang C**, F Dominici, G Parmigiani and C Zigler. Accounting for Uncertainty in Confounder and Effect Modifier Selection When Estimating Average Causal Effects in Generalized Linear Models. American Statistical Association Joint Statistical Meetings. Chicago, IL.
4. 03/2017. Wang H, Horbinski C, Wu H, Liu Y, Sheng S, Liu J, Weiss H, Stromberg A, **Wang C**. A Novel Statistical Tool for Differential Expression Analysis of NanoString nCounter Data. Statistical Practice in Cancer Conference, Tampa, FL.
5. 08/2018. Liu S, Liu J, Xie Y, Zhai T, Hinderer EW, Stromberg AJ, Canderford NL, Kolesar JM, Moseley HNB, Chen L, Liu C, **Wang C**. A New Statistical Method for Genome-Scale Mutual Exclusivity Analysis of Tumor Mutations. Vancouver, Canada.
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7. 03/2023. Tiantian Zeng, Md Selim, Jie Zhang, Jill M Kolesar, Arnold J. Stromberg, Jin Chen, **Chi Wang**. Cancer Prognostic Modeling based on Radiogenomics Data. Oncological Data Science (ODSi) Symposium. Salt Lake City, Utah.

XIV. RESEARCH & INTELLECTUAL CONTRIBUTIONS - *continued*

C. SPONSORED RESEARCH PROJECTS, GRANT & CONTRACT ACTIVITIES

Active

Project Title: Develop Novel Radiogenomic Data Representation Methods for Enhanced Clinical Outcome Prediction
Project Number: ME-2024C1-33497
Principal Investigator(s): Chen, Jin and Wang, Chi
Role in Project: MPI
Effort: 10%
Institution/University: University of Alabama at Birmingham and University of Kentucky
Source of Funding: Patient-Centered Outcomes Research Institute (PCORI)
Duration of Project: 05/2025 – 08/2029
Total Award: \$1,085,559
Grant Number: ME-2024C1-33497

Project Title: Spatial Transcriptomic Characterization of Pediatric Brain Tumors in Kentucky
Project Number: PON2 728 2300001757
Principal Investigator(s): Wang, Chi and Durbin, Eric
Role in Project: contact MPI
Effort: 10%
Institution/University: University of Kentucky
Source of Funding: Pediatric Cancer Research Trust Fund
Duration of Project: 07/2023-06/2025
Total Award: \$500,000
Grant Number: PON2 728 2300001757

Project Title: Statistical Methods for Identification and Evaluation of Predictive Biomarkers in Cancer
Project Number: 1R21CA284179-01A1
Principal Investigator(s): Chen, Li and Wang, Chi
Role in Project: MPI
Effort: 6% Year 1; 16.7% Year 2
Institution/University: University of Kentucky
Source of Funding: National Cancer Institute
Duration of Project: 07/2024 - 06/2026
Total Award: \$388,673
Grant Number: 1R21CA284179-01A1

Project Title: Aberrant Fucosylation is a Critical Feature of Neuroblastoma Immune Evasion
Project Number: V2023-026
Principal Investigator(s): Rellinger, Eric

Role in Project: Biostatistician/bioinformatics support
Effort: 5%
Institution/University: University of Kentucky
Source of Funding: V Foundation
Duration of Project: 10/2023 - 10/2026
Total Award: \$600,000
Grant Number: V2023-026

Project Title: Combating Melanoma Resistance by Targeting ABL1/2
Project Number: 5R01CA258751-03
Principal Investigator(s): Plattner, Rina
Role in Project: Biostatistician
Effort: 5.8%
Institution/University: University of Kentucky
Source of Funding: National Cancer Institute
Duration of Project: 05/2022 - 04/2027
Total Award: \$2,924,608
Grant Number: 5R01CA258751-03

Project Title: Understanding the Role of Sulfiredoxin in Glucose Metabolism in Non-Small Cell Lung Cancer
Project Number: 5P20GM121327-08
Principal Investigator(s): Wei, Qiou
Role in Project: Biostatistician
Effort: 0.5%
Institution/University: University of Kentucky
Source of Funding: National Institute of General Medical Sciences
Duration of Project: 03/2017 - 12/2026
Total Award: \$50,000
Grant Number: 5P20GM121327-08

Project Title: Plk1 as a Prognostic Biomarker for Prostate Cancer
Project Number: 5R01CA264652-04
Principal Investigator(s): Liu, Xiaoqi
Role in Project: Biostatistician
Effort: 0.5%
Institution/University: University of Kentucky
Source of Funding: National Cancer Institute
Duration of Project: 07/2021 - 06/2026
Total Award: \$2,724,632
Grant Number: 5R01CA264652-04

Project Title: Study Of PTPRF-Mediated Regulation Of Wnt Signaling
Project Number: 5R01GM150200-02
Principal Investigator(s): Gao, Tianyan
Role in Project: Biostatistician

Effort: 3%
Institution/University: University of Kentucky
Source of Funding: National Institute of General Medical Sciences
Duration of Project: 06/2023 - 03/2027
Total Award: \$1,388,500
Grant Number: 5R01GM150200-02

Project Title: Fatty Acid Synthase as a Novel Molecular Target for Colon Cancer Treatment
Project Number: 5R01CA284532-02
Principal Investigator(s): Gao, Tianyan
Role in Project: Biostatistician
Effort: 3%
Institution/University: University of Kentucky
Source of Funding: National Cancer Institute
Duration of Project: 03/2024 - 02/2029
Total Award: \$2,014,840
Grant Number: 5R01CA284532-02

Project Title: Targeting NNMT to inhibit obesity-associated breast cancer development and progression
Project Number: HT94252311009
Principal Investigator(s): Zhou, Binhua
Role in Project: Biostatistician
Effort: 2% Year 3
Institution/University: University of Kentucky
Source of Funding: Department of Defense
Duration of Project: 09/2023 - 08/2026
Total Award: \$1,215,057
Grant Number: HT94252311009

Project Title: Targeting the Immunosuppressive Tumor Microenvironment for Colorectal Cancer Treatment
Project Number: 1R01CA272669-01A1
Principal Investigator(s): Wang, Qingding
Role in Project: Biostatistician
Effort: 2% Year 3
Institution/University: University of Kentucky
Source of Funding: National Cancer Institute
Duration of Project: 09/2023 - 08/2028
Total Award: \$2,001,380
Grant Number: 1R01CA272669-01A1

Project Title: The Role of Calpain-5 in Endometrial Cancer
Project Number: NA
Principal Investigator(s): Yang, Eddy

Role in Project: Co-Investigator
Effort: 0.5%
Institution/University: University of Kentucky
Source of Funding: National Cancer Institute
Duration of Project: 07/2024 - 06/2025
Total Award: \$76,500
Grant Number: NA

Project Title: Defining the Critical Function and Regulation of NNMT in Breast Cancer Progression and Metastasis
Project Number: 5R01CA259580-02
Principal Investigator(s): Zhou, Binhua
Role in Project: Co-Investigator
Effort: 5%
Institution/University: University of Kentucky
Source of Funding: NIH
Duration of Project: 04/2021-03/2026
Total Award: \$1,965,259
Grant Number: 5R01CA259580-02

Project Title: Enhancing the Efficacy of Androgen Signaling Inhibitors in Prostate Cancer
Project Number: 5R01CA256893-02
Principal Investigator(s): Liu, Xiaoqi
Role in Project: Co-Investigator
Effort: 5%
Institution/University: University of Kentucky
Source of Funding: NIH
Duration of Project: 07/2021 - 06/2026
Total Award: \$2,467,501
Grant Number: 5R01CA256893-02

Project Title: Platelet Metabolism in Diabetes Mellitus
Project Number: 1R01HL160910-01
Principal Investigator(s): Wang, Qingjun
Role in Project: Co-Investigator
Effort: 5 %
Institution/University: University of Kentucky
Source of Funding: NIH
Duration of Project: 09/2022 - 06/2026
Total Award: \$2,142,567
Grant Number: 1R01HL160910-01

Project Title: Roles of Hsp47 in Breast Cancer Progression
Project Number: 2R01CA207772-06A1
Principal Investigator(s): Xu, Ren

Role in Project: Co-Investigator
Effort: 2.5 %
Institution/University: University of Kentucky
Source of Funding: National Cancer Institute
Duration of Project: 03/2017 - 05/2027
Total Award: \$1,816,875
Grant Number: 2R01CA207772-06A1

Project Title: Targeting Polo-Like Kinase 1 in Prostate Cancer to Enhance Therapeutic Efficacy
Project Number: 1R01CA266579-01A1
Principal Investigator(s): Li, Zhiguo
Role in Project: Co-Investigator
Effort: 5 %
Institution/University: University of Kentucky
Source of Funding: National Cancer Institute
Duration of Project: 07/2022 - 06/2027
Total Award: \$2,226,130
Grant Number: 1R01CA266579-01A1

Project Title: Mechanistic Impact of PI3K/mTOR Signaling on Intestinal Homeostasis
Project Number: R01 DK048498
Principal Investigator(s): Evers, BM
Role in Project: Co-Investigator
Effort: 5%
Institution/University: University of Kentucky
Source of Funding: NIH
Duration of Project: 03/1996-06/2025
Total Award: \$3,648,051
Grant Number: R01 DK048498

Project Title: University of Kentucky Markey Cancer Center – Cancer Center Support Grant
Project Number: P30 CA177558
Principal Investigator(s): Evers, BM
Role in Project: Faculty Biostatistician
Effort: 5%
Institution/University: University of Kentucky
Source of Funding: NIH
Duration of Project: 07/2023-06/2028
Total Award: \$15,498,260
Grant Number: P30 CA177558

Project Title: University of Kentucky Center for Cancer and Metabolism
Project Number: P20 GM121327
Principal Investigator(s): MPI: St. Clair, D [contact]; Zhou, B.P.

Role in Project:	Biostatistician
Effort:	2.5%
Institution/University:	University of Kentucky
Source of Funding:	NIH
Duration of Project:	03/01/2017-12/31/2026
Total Award:	\$22,660,515
Grant Number:	P20 GM121327

XIV. RESEARCH & INTELLECTUAL CONTRIBUTIONS - *continued*

C. SPONSORED RESEARCH PROJECTS, GRANT & CONTRACT ACTIVITIES – *continued*

Completed

Project Title: Statistical Methods for Cancer Progression Delineation and Subtype Identification
Project Number: R03 CA259670
Principal Investigator(s): Wang, C
Role in Project: PI
Effort: 10%
Institution/University: University of Kentucky
Source of Funding: NIH
Duration of Project: 07/2021-06/2024
Total Award: \$149,804
Grant Number: R03 CA259670

Project Title: Statistical Detection and Biochemical Classification of Cancer Driven Mutation Patterns in Biological Networks
Project Number: R21 CA205778
Principal Investigator(s): MPI: Wang, C [contact]; Moseley, H
Role in Project: Contact MPI
Effort: 9 %
Institution/University: University of Kentucky
Source of Funding: NIH
Duration of Project: 08/2016-01/2019
Total Award: \$382,304
Grant Number: R21 CA205778

Project Title: Differential Abundance Methods for Large Heterogeneous-Featured Metabolomics Datasets
Project Number: R03 CA211835
Principal Investigator(s): MPI: Wang, C [contact]; Flight, R
Role in Project: Contact MPI
Effort: 9 %
Institution/University: University of Kentucky
Source of Funding: NIH
Duration of Project: 09/2016-08/2017
Total Award: \$145,716
Grant Number: R03 CA211835

Project Title: Harnessing Advanced Genomic and Bioinformatics Technologies for in-depth Molecular Characterization of Lung Adenocarcinoma in KY

Project Number: PO2 415 1400004000 1
Principal Investigator(s): Wang, C
Role in Project: PI
Effort: 4 %
Institution/University: University of Kentucky
Source of Funding: The Kentucky Lung Cancer Research Program
Duration of Project: 07/2015-06/2018
Total Award: \$150,000
Grant Number: PO2 415 1400004000 1

Project Title: Characterization of Squamous Cell Lung Cancers from Appalachian Kentucky

Project Number: PO2 415 1600001032
Principal Investigator(s): MPIs: Wang, C [contact]; Arnold, S; Liu, C
Role in Project: contact MPI
Effort: 2%
Institution/University: University of Kentucky
Source of Funding: Kentucky Lung Cancer Research Program
Duration of Project: 07/2018-06/2023
Total Award: \$150,000
Grant Number: PO2 415 1600001032

Project Title: A Novel Genomic Approach for High-Throughput Drug Screening

Project Number: No ID
Principal Investigator(s): MPIs: Wang, C [contact]; Liu, C
Role in Project: contact MPI
Effort: no effort requested
Institution/University: University of Kentucky
Source of Funding: UK CCTS High Impact Pilot Award
Duration of Project: 11/2021-03/2023
Total Award: \$50,000
Grant Number: No ID

Project Title: A Probabilistic Model to Identify Unique Tumorigenesis Process of Lung Cancer in Appalachian Kentucky

Project Number: No ID
Principal Investigator(s): Wang C, Arnold S, and Liu C
Role in Project: contact MPI
Effort: 0%
Institution/University: University of Kentucky
Source of Funding: UK CCTS High Impact Pilot Award
Duration of Project: 04/2019-03/2021
Total Award: \$37,000
Grant Number: No ID

Project Title: Development of a Model-based Bioinformatics Method for Comparing Somatic Mutation Patterns between Groups, with Application to Squamous Cell Lung Cancer Data in Appalachian Kentucky
Project Number: No ID
Principal Investigator(s): Wang, C
Role in Project: PI
Effort: 0 %
Institution/University: University of Kentucky
Source of Funding: UK CCTS Junior Investigator Award
Duration of Project: 01/2015-07/2016
Total Award: \$25,000
Grant Number: No ID

Project Title: Genomics in Cancer for Appalachian Kentucky
Project Number: No ID
Principal Investigator(s): MPI: Arnold, S [contact] and Wang, C
Role in Project: MPI
Effort: 0 %
Institution/University: University of Kentucky
Source of Funding: UK CCTS
Duration of Project: 10/2013-03/2015
Total Award: \$225,000
Grant Number: No ID

Project Title: Systems Biochemistry in Lung Cancer Toward a Mechanistic Understanding of NSCLC
Project Number: P01 CA163223
Principal Investigator(s): Lane, A
Role in Project: Co-Investigator
Effort: 8 %
Institution/University: University of Kentucky
Source of Funding: NIH
Duration of Project: 03/2013-02/2020
Total Award: \$4,795,060
Grant Number: P01 CA163223

Project Title: Non-destructive optical spectroscopic assay for high-throughput metabolic characterization of in vitro tumor models and patient-derived organoids
Project Number: R21 EB032515
Principal Investigator(s): Zhu, C
Role in Project: Co-Investigator
Effort: 2%
Institution/University: University of Kentucky
Source of Funding: NIH

Duration of Project: 08/2022-04/2025
Total Award: \$600,473
Grant Number: R21 EB032515

Project Title: COVID-19: Evaluation of SARS-CoV-2 Positivity, Genetic Risk Factors & Outcomes in Patients Enrolled on TCC

Project Number: No ID
Principal Investigator(s): Kolesar, J
Role in Project: Co-Investigator
Effort: 2.5%
Institution/University: University of Kentucky
Source of Funding: M2Gen
Duration of Project: 10/2020-10/2025
Total Award: \$375,512
Grant Number: No ID

Project Title: G Protein Signaling in Brain Injury
Project Number: R56 NS124707
Principal Investigator(s): Andres, D
Role in Project: Co-Investigator
Effort: 2.5%
Institution/University: University of Kentucky
Source of Funding: NIH
Duration of Project: 07/2022-06/2023
Total Award: \$535,500
Grant Number: R56 NS124707

Project Title: Ceramide and Acute Phase Proteins Elevation During Aging
Project Number: R01 AG019223
Principal Investigator(s): Nikolova-Karakashian, M
Role in Project: Co-Investigator
Effort: 1%
Institution/University: University of Kentucky
Source of Funding: NIH
Duration of Project: 08/2002-05/2023
Total Award: \$2,049,176
Grant Number: R01 AG019223

Project Title: Targeting Translation Dependence in Colorectal Cancer Progression
Project Number: R01 CA175105
Principal Investigator(s): She, QB
Role in Project: Co-Investigator
Effort: 2%
Institution/University: University of Kentucky
Source of Funding: NIH

Duration of Project: 04/2013-11/2024
Total Award: \$1,816,875
Grant Number: R01 CA175105

Project Title: CIO Pilot: Circulating Neutrophils-Tailored Cancer Biomarker Discovery and Therapy

Project Number: NA
Principal Investigator(s): Xia, Liu
Role in Project: Biostatistician
Effort: 1.6%
Institution/University: University of Kentucky
Source of Funding: National Cancer Institute
Duration of Project: 10/2023 - 09/2024
Total Award: \$76,500
Grant Number: NA

Project Title: COBRE Pilot: DNA Mismatch Repair-dependent Metabolic Adaptation after Chemotherapy

Project Number: NA
Principal Investigator(s): Goellner, Eva
Role in Project: Biostatistician
Effort: 0.5%
Institution/University: University of Kentucky
Source of Funding: National Institute of General Medical Sciences
Duration of Project: 01/2024 - 12/2024
Total Award: \$50,999
Grant Number: NA

Project Title: CCSG Pilot: Targeting Merkel Cell Carcinoma by Natural Product-Based Degradation of MCV Small T Antigen

Project Number: NA
Principal Investigator(s): She, QB
Role in Project: Co-Investigator
Effort: 0.5%
Institution/University: University of Kentucky
Source of Funding: National Cancer Institute
Duration of Project: 07/2024 - 06/2025
Total Award: \$76,500
Grant Number: NA

Project Title: RNA Surveillance and Protein Translation in FTD

Project Number: R01 NS115507
Principal Investigator(s): Zhu, H
Role in Project: Co-Investigator
Effort: 3%
Institution/University: University of Kentucky

Source of Funding: NIH
Duration of Project: 07/2020-06/2025
Total Award: \$2,754,540
Grant Number: R01 NS115507

Project Title: Aberrant Glycogen Modulates Cerebral Glucose Metabolism in Aging and Alzheimer's Disease

Project Number: R01 AG066653
Principal Investigator(s): Sun, R.
Role in Project: Co-Investigator
Effort: 5%
Institution/University: University of Kentucky
Source of Funding: NIH
Duration of Project: 04/2020-03/2025
Total Award: \$1,912,500
Grant Number: R01 AG066653

Project Title: Distinct Redox Mechanism in Normal and Cancer Cells as a Novel Therapeutic Target

Project Number: R01 CA205400
Principal Investigator(s): MPI: St Clair, D [contact]; St Clair W
Role in Project: Co-Investigator
Effort: 10%
Institution/University: University of Kentucky
Source of Funding: NIH
Duration of Project: 04/2016-03/2021
Total Award: \$1,697,812
Grant Number: R01 CA205400

Project Title: RIT1-mediated Protection Following Traumatic Brain Injury

Project Number: R01 NS102196
Principal Investigator(s): Andres, D
Role in Project: Co-Investigator
Effort: 2%
Institution/University: University of Kentucky
Source of Funding: NIH
Duration of Project: 02/2018-01/2023
Total Award: \$2,544,995
Grant Number: R01 NS102196

Project Title: Methionine Metabolism and Lung Cancer Lineage Fate

Project Number: RSG-19-081-01-TBG
Principal Investigator(s): Brainson, C
Role in Project: Co-Investigator
Effort: 1%
Institution/University: University of Kentucky
Source of Funding: American Cancer Society

Duration of Project: 07/2019-06/2023
Total Award: \$792,000
Grant Number: RSG-19-081-01-TBG

Project Title: Peripheral Blood Exosome Lipids as Biomarkers of Disease Activity in Crohn's Disease

Project Number: R21 DK118954
Principal Investigator(s): Barrett, T
Role in Project: Co-Investigator
Effort: 2%
Institution/University: University of Kentucky
Source of Funding: NIH
Duration of Project: 09/2018-08/2021
Total Award: \$431,478
Grant Number: R21 DK118954

Project Title: Carryover: UK – Pediatric Brain and Central Nervous System Tumors C2417

Project Number: PON2 728 1900003176
Principal Investigator(s): Durbin, E.
Role in Project: Co-Investigator
Effort: 5%
Institution/University: University of Kentucky
Source of Funding: Kentucky Pediatric Cancer Research Trust Fund
Duration of Project: 07/2020-06/2021
Total Award: \$161,806
Grant Number: PON2 728 1900003176

Project Title: A Pilot Study of Molecular Profile Differences Between Long and Short Term Lung Cancer Survivors

Project Number: PO2 415 1600001032
Principal Investigator(s): Rangnekar, V
Role in Project: Co-Investigator
Effort: 1%
Institution/University: University of Kentucky
Source of Funding: Kentucky Lung Cancer Research Program
Duration of Project: 07/2018-06/2021
Total Award: \$150,000
Grant Number: PO2 415 1600001032

Project Title: A Novel Peptide to Inhibit Rictor-amplified Lung Tumorigenesis

Project Number: PO2 415 1600001032
Principal Investigator(s): Yang, H-S
Role in Project: Co-I
Effort: 1.5%
Institution/University: University of Kentucky
Source of Funding: Kentucky Lung Cancer Research Program

Duration of Project: 07/2018-06/2021
Total Award: \$150,000
Grant Number: PO2 415 1600001032

Project Title: A Phase I Dose Escalation Study on the Safety of Lapatinib with Dose-Dense Paclitaxel in Patients with Platinum-Resistant Ovarian Cancer

Project Number: P30 CA177558 Pilot Project

Principal Investigator(s): Ueland, F

Role in Project: Biostatistician

Effort: 1%

Institution/University: University of Kentucky

Source of Funding: NIH

Duration of Project: 07/2020-06/2021

Total Award: \$68,550

Grant Number: P30 CA177558 Pilot Project

Project Title: Utility of ctDNA in Personalized Therapy for Non-Small-Cell Lung Cancer

Project Number: PO2 415 1400004000 1

Principal Investigator(s): Kolesar, J

Role in Project: Co-I

Effort: 1%

Institution/University: University of Kentucky

Source of Funding: Kentucky Lung Cancer Research Program

Duration of Project: 07/2017-06/2021

Total Award: \$150,000

Grant Number: PO2 415 1600001032

Project Title: Natural Product-Based Modulators of 4E-BP1 Phosphorylation

Project Number: R01 CA203257

Principal Investigator(s): MPI: Thorson, J; She, Q-B

Role in Project: Co-Investigator

Effort: 1%

Institution/University: University of Kentucky

Source of Funding: NIH

Duration of Project: 04/2016-03/2021

Total Award: \$1,933,963

Grant Number: R01 CA203257

Project Title: Selection of Personalized Cancer Therapies by Evaluating Intratumoral Heterogeneity and Phylogenetic Analysis

Project Number: No ID

Principal Investigator(s): Kolesar, J

Role in Project: Co-Investigator

Effort: 0 %

Institution/University: University of Kentucky

Source of Funding: CCSG pilot grant
Duration of Project: 07/2018-06/2019
Total Award: \$50,000
Grant Number: No ID

Project Title: Novel pRNA Nanoparticle Delivery as Directed Therapy for Colorectal Cancer Metastasis

Project Number: R01 CA195573
Principal Investigator(s): MPI: Evers, BM [contact]; Guo, P; Thorson, J
Role in Project: Biostatistician
Effort: 5 %
Institution/University: University of Kentucky
Source of Funding: NIH
Duration of Project: 09/2015-08/2020
Total Award: \$1,384,065
Grant Number: R01 CA195573

Project Title: Regulation of Snail in breast cancer progression and metastasis

Project Number: R01 CA125454
Principal Investigator(s): Zhou, B
Role in Project: Co-Investigator
Effort: 5 % (effort only in 2016-2018)
Institution/University: University of Kentucky
Source of Funding: NIH
Duration of Project: 12/2006-04/2018
Total Award: \$921,710
Grant Number: R01 CA125454

Project Title: Role of Tcl1 and par-4 in regulation of chronic lymphocytic leukemia

Project Number: R01 CA165469
Principal Investigator(s): MPI: Bondada, S; Rangnekar V
Role in Project: Co-Investigator
Effort: 3 %
Institution/University: University of Kentucky
Source of Funding: NIH
Duration of Project: 02/2013-01/2018
Total Award: \$1,386,095
Grant Number: R01 CA165469

Project Title: A role for c-Abl/Arg in Melanoma Progression

Project Number: R01 CA166499
Principal Investigator(s): Plattner, R
Role in Project: Co-Investigator
Effort: 5 %
Institution/University: University of Kentucky

Source of Funding: NIH
Duration of Project: 09/2012-08/2017
Total Award: \$1,062,435
Grant Number: R01 CA166499

Project Title: Assessing the Mechanism of Drug Resistance in Lung Cancer
Project Number: PO2 415 1600001032
Principal Investigator(s): Kolesar, J
Role in Project: Co-Investigator
Effort: 1%
Institution/University: University of Kentucky
Source of Funding: Kentucky Lung Cancer Research Program
Duration of Project: 07/2018-06/2022
Total Award: \$150,000
Grant Number: PO2 415 1600001032

Project Title: Genomic Architecture of a Key Alzheimer's Disease mimic:
CARTS
Project Number: R56 AG057191
Principal Investigator(s): Fardo, D
Role in Project: Co-Investigator
Effort: 5%
Institution/University: University of Kentucky
Source of Funding: NIH
Duration of Project: 05/2019-02/2022
Total Award: \$1,079,062
Grant Number: R56 AG057191

Project Title: Targeting Epigenetic Heterogeneity to Improve Lung Cancer
Immunotherapy Response (CII or MONC)
Project Number: R21 AA026787
Principal Investigator(s): Chen, G
Role in Project: Co-Investigator
Effort: 2.5%
Institution/University: University of Kentucky
Source of Funding: NIH
Duration of Project: 02/2019-01/2022
Total Award: \$401,626
Grant Number: R21 AA026787

Project Title: Roles of RORalpha in Breast Cancer Development and
Progression
Project Number: R01 CA215095
Principal Investigator(s): Xu, R
Role in Project: Co-Investigator
Effort: 5% Yrs 3 and 5 only

Institution/University: University of Kentucky
Source of Funding: NIH
Duration of Project: 07/2017-06/2022
Total Award: \$1,726,893
Grant Number: R01 CA215095

Project Title: Identification of Lung Adenocarcinoma Subtypes using Radiogenomics and Deep Learning
Project Number: PO2 415 1600001032
Principal Investigator(s): Chen, J
Role in Project: Co-I
Effort: 1%
Institution/University: University of Kentucky
Source of Funding: Kentucky Lung Cancer Research Program
Duration of Project: 07/2018-06/2022
Total Award: \$150,000
Grant Number: PO2 415 1600001032

Project Title: Translational Control in CR(VI) Carcinogenesis
Project Number: R21 ES031712
Principal Investigator(s): She, QB
Role in Project: Co-Investigator
Effort: 1% Yr1, 2% Yr2
Institution/University: University of Kentucky
Source of Funding: NIH
Duration of Project: 06/2020-05/2022
Total Award: \$688,500
Grant Number: R21 ES031712

Project Title: Germline and Environmental Factors Associated with Pediatric Brain and Central Nervous System Tumors in Kentucky
Project Number: No ID
Principal Investigator(s): Durbin, E
Role in Project: Co-Investigator
Effort: 5%
Institution/University: University of Kentucky
Source of Funding: Pediatric Cancer Research Trust Fund
Duration of Project: 07/2020-06/2022
Total Award: \$499,715
Grant Number: No ID

Project Title: Novel Antibody-Enzyme Fusion Therapy Targeting Ewing's Sarcoma
Project Number: No ID
Principal Investigator(s): Sun, R
Role in Project: Co-Investigator

Effort: 1%
Institution/University: University of Kentucky
Source of Funding: V Foundation
Duration of Project: 07/2020-06/2022
Total Award: \$200,000
Grant Number: No ID

Project Title: Accelerate
Project Number: PON2 728 2200004154
Principal Investigator(s): Durbin, Eric
Role in Project: Co-Investigator
Effort: 5%
Institution/University: University of Kentucky
Source of Funding: KY Cabinet for Health and Family Services
Duration of Project: 07/2022 - 06/2024
Total Award: \$1,316,947
Grant Number: PON2 728 2200004154

Project Title: Gold Complexes that Regulate Metabolism and Microbiome to Accelerate Mucosal Healing in IBD
Project Number: 993820
Principal Investigator(s): Barrett, Terrence
Role in Project: Co-Investigator
Effort: 5%
Institution/University: University of Kentucky
Source of Funding: Crohns and Colitis Foundation of America
Duration of Project: 02/2023 - 01/2024
Total Award: \$220,000
Grant Number: 993820

Project Title: Latexin function in the maintenance and regeneration of the hematopoietic system
Project Number: 5R01HL124015-07
Principal Investigator(s): Liang, Y
Role in Project: Co-Investigator
Effort: 3 %
Institution/University: University of Kentucky
Source of Funding: NIH
Duration of Project: 01/2016 - 07/2025
Total Award: \$1,526,716
Grant Number: 5R01HL124015-07

Project Title: Integrin Alpha6beta4 Regulation of Cancer Epigenetics
Project Number: R01 CA223164
Principal Investigator(s): O'Connor, K
Role in Project: Co-Investigator

Effort: 1%
Institution/University: University of Kentucky
Source of Funding: NIH
Duration of Project: 01/2019-12/2023
Total Award: \$2,330,265
Grant Number: R01 CA223164

Project Title: Altered Lipid Metabolism as a Novel Target for Colon Cancer Treatment

Project Number: R01 CA208343
Principal Investigator(s): MPI: Evers, BM [contact]; Gao, T
Role in Project: Co-Investigator
Effort: 10%
Institution/University: University of Kentucky
Source of Funding: NIH
Duration of Project: 08/2017-07/2023
Total Award: \$2,113,800
Grant Number: R01 CA208343

Project Title: Mechanistic and Pharmacologic Studies of Selective Mithramycin Analogues Targeting EWS-FLI1 in Ewing Sarcoma

Project Number: R01 CA243529
Principal Investigator(s): MPIs: Leggas, M [contact]; Thorson, J; Tsodikov, O
Role in Project: Biostatistician
Effort: 1%
Institution/University: University of Kentucky
Source of Funding: NIH
Duration of Project: 06/2020-05/2025
Total Award: \$3,010,556
Grant Number: R01 CA243529

Project Title: Role of P4HA1 in Endocrine Resistance of Breast Cancer

Project Number: 1R21AG080176-01
Principal Investigator(s): Xiong, GaoFeng
Role in Project: Co-Investigator
Effort: 2.5 %
Institution/University: University of Kentucky
Source of Funding: National Institute on Aging
Duration of Project: 03/2023 - 02/2025
Total Award: \$420,750
Grant Number: 1R21AG080176-01

XIV. RESEARCH & INTELLECTUAL CONTRIBUTIONS - *continued*

E. OTHER CREATIVE ACTIVITIES [oldest at top, newest at bottom; include innovative materials, clinical protocols, institutional packages, modules, computer programs, innovative teaching materials, patented and copyrighted intellectual property; describe where work used and by whom]

Patents

Chunming Liu, **Chi Wang**, Shulin Zhang. Systems and Methods for Mixed Multiple Cell Line Screening Using Endogenous Single Nucleotide Polymorphism (SNP)-based Cell Line Identification. U.S. Patent Application No. US 2024/0410877 A1, 2024.

Shulin Zhang, Chunming Liu, **Chi Wang**. A Novel Genomic Approach for Detecting Circulating Tumor Cells (CTCs). U.S. Provisional Patent Application No. 63/804,957, 2025.

Software

bacr: an R package that implements the Bayesian Adjustment for Confounding (BAC) method for estimating the average causal effect of a treatment on an outcome from cohort studies. The software package is available at [CRAN](#).

NanoStringDiff: an R package to perform differential expression analysis based on gene expression data generated from the NanoString nCounter system. The software package is available at [Bioconductor](#).

SDAMS: an R package that implements a semiparametric method for differential abundance/expression analysis of proteomic, metabolomic and scRNAseq data. The software package is available at [Bioconductor](#).

PATOPA: a bioinformatics software to delineate the temporal order of driver mutations during carcinogenesis by leveraging functional annotation and pathway information. The software is available at [GitHub](#).

PATOPAI: a bioinformatics software to delineate the temporal order of driver mutations during carcinogenesis by incorporating intratumoral heterogeneity along with functional annotation and pathway information. The software is available at [GitHub](#).

DASEV: an R package that implements a two-part model with Bayesian shrinkage estimation of variance for differential abundance analysis of proteomic and metabolomic data. The software package is available at <http://sweb.uky.edu/~cwa236/DASEV.html>.

MEScan: a bioinformatics software to identify cancer driver mutations by genome-wide screen of mutually exclusive mutation patterns. The software is available at [GitHub](#).

XV. OTHER ACTIVITIES [oldest at top, newest at bottom; writing board examinations, curricular design committees]

Not applicable.

END OF DOCUMENT