August 1, 2024

CURRICULUM VITAE

Yu Shyr, PhD

PRESENT POSITIONS

Chair
Department of Biostatistics
Vanderbilt University Medical Center

Harold L. Moses Chair in Cancer Research
Vanderbilt University Medical Center

Director
Center for Quantitative Sciences (CQS)
Vanderbilt University Medical Center

Director
Vanderbilt Technologies for Advanced Genomics Analysis and Research Design (VANGARD)
Vanderbilt University Medical Center

Associate Director for Quantitative Sciences
Vanderbilt-Ingram Cancer Center
Vanderbilt University Medical Center

Professor
Department of Biostatistics
Department of Biomedical Informatics
Department of Health Policy
Vanderbilt University Medical Center

Associate Editor for Statistics
JAMA Oncology

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EDUCATION

1981–1985	*BB*, Statistics Tamkang University (Taiwan)
1987–1989	*MS*, Statistics Michigan State University
1989–1994	*PhD*, Biostatistics University of Michigan, Ann Arbor Dissertation: Some Aspects of Canonical Correlation Analysis

EXPERIENCE

1988–1989	***Graduate Student Teaching Assistant (GSTA), Department of Statistics*** Michigan State University
1989–1994	***Graduate Student Research Assistant (GSRA), Department of Biostatistics*** University of Michigan
1990	***Research Associate, Institute of Gerontology*** University of Michigan
1991–1992	***Research Associate, Department of Periodontics/Prevention/Geriatrics*** University of Michigan School of Dentistry
1993–1994	***Adjunct Lecturer, Department of Biostatistics*** University of Michigan
1994–1998	***Chief Biostatistician, Vanderbilt-Ingram Cancer Center*** Vanderbilt University School of Medicine
1994–1999	***Assistant Professor of Biostatistics, Department of Preventive Medicine*** Vanderbilt University School of Medicine
1997–1998	***Consultant*** Lexicon Genetics, Inc.
1997–2000	***Consultant*** Applied Medical Research, Inc.
1998–2014	***Director, Biostatistics Shared Resource, Vanderbilt-Ingram Cancer Center*** Vanderbilt University School of Medicine
1999–2002	***Associate Professor of Biostatistics, Department of Preventive Medicine*** Vanderbilt University School of Medicine
2000	***Acting Director, Division of Biostatistics, Department of Preventive Medicine*** Vanderbilt University School of Medicine
2000	***Chair Professor of Statistics*** Tamkang University
2001–2013	***Faculty, Center for Technology-Guided Therapy*** Vanderbilt University School of Engineering & Medical Center
2001–2012	***Director, Biostatistics Core, Lung Cancer SPORE*** (Specialized Program of Research Excellence) Vanderbilt University School of Medicine
2001–present	***Director, Biostatistics and Bioinformatics Shared Resource Core*** Meharry-Vanderbilt-Tennessee State Cancer Partnership
2002–present	***Director, Biostatistics and Bioinformatics Core, GI Cancer SPORE*** Vanderbilt University Medical Center
2003–present	***Director, Biostatistics and Bioinformatics Core, Breast Cancer SPORE*** Vanderbilt University Medical Center
2003–2013	***Professor of Biostatistics, Department of Preventive Medicine*** Vanderbilt University School of Medicine
2003–present	***Professor, Department of Biostatistics*** Vanderbilt University Medical Center
2003–2013	***Ingram Professor of Cancer Research*** Vanderbilt University School of Medicine

2004–2006	***Consultant*** CooperSurgical, Inc.
2005–2012	***Adjunct Professor*** Tokai University School of Medicine (Japan)
2006–2017	***Chief, Division of Cancer Biostatistics, Department of Biostatistics*** Vanderbilt University Medical Center
2006–2018	***Invited Professor*** Shanghai Center for Bioinformatics Technology (China)
2006–2014	***Affiliate Professor, Department of Statistics*** National Cheng Kung University (Taiwan)
2007–2011	***Director, Cancer Biostatistics Center, Vanderbilt-Ingram Cancer Center*** Vanderbilt University Medical Center
2007–2009	***Consultant*** Westat, Inc.
2009–present	***Associate Director for Quantitative Sciences, Vanderbilt-Ingram Cancer Center*** Vanderbilt University Medical Center
2009–2012	***Director, Statistical Center*** Sentinel Node Oncology Foundation (SNOF)
2009–2014	***Voting Member, Anti-infective Drugs Advisory Committee*** US Food and Drug Administration (FDA)
2010–present	***Consultant*** GlaxoSmithKline Oncology
2011–2017	***Visiting Chair Professor, Department of Bioinformatics and Biostatistics*** Shanghai Jiao Tong University (China)
2011–present	***Director, Center for Quantitative Sciences*** Vanderbilt University Medical Center
2011–2017	***Professor, Department of Cancer Biology*** Vanderbilt University School of Medicine
2011–present	***Professo*r, *Department of Biomedical Informatics*** Vanderbilt University Medical Center
2012–present	***Director, VANGARD*** Vanderbilt University Medical Center
2013–present	***Harold L. Moses Chair in Cancer Research*** Vanderbilt University Medical Center
2013–present	***Professor, Department of Health Policy*** Vanderbilt University Medical Center
2014–2019	***Director, Quantitative Sciences Shared Resource, Vanderbilt-Ingram Cancer Center*** Vanderbilt University Medical Center
2014–present	***Visiting Distinguished Chair Professor, Department of Statistics*** National Cheng Kung University (Taiwan)
2014–present	***Consultant*** Janssen Pharmaceuticals (Johnson & Johnson), Inc.
2014–present	***Consultant*** Roche U.S. Pharmaceuticals, Inc.

2014–2015	***Consultant*** ACR Biologics, LLC
2015–present	***Consultant*** Novartis Pharmaceuticals Corporation
2016–present	***Consultant*** Center for Drug Evaluation and Research (CDER), FDA
2017–present	***Chair, Department of Biostatistics*** Vanderbilt University Medical Center
2018–present	***Training Faculty Member, Program in Cancer Biology*** Vanderbilt University School of Medicine
2019–present	***Director, Data Science Shared Resource, Vanderbilt-Ingram Cancer Center*** Vanderbilt University Medical Center
2020–present	***Consultant*** Mustang Bio, Inc.
2021–present	***Chair Professor of Health Data Science*** Taipei Medical University (Taiwan)
2023	***Founding Director*** Vanderbilt Biostatistics Data Coordinating Center

HONORS

1. American Statistical Association Chapter Service Recognition Award, 2000
2. Vanderbilt University School of Medicine Master of Science in Clinical Investigation Program Excellence in Teaching Award, 2002, 2003, 2004
3. Distinguished Alumni Award, Department of Statistics, Tamkang University, 2008
4. Fellow, American Statistical Association, elected 2010
5. Highest-Rated Lecture, AACR/ASCO Methods in Clinical Cancer Research Workshop, Vail, Colorado, 2010, 2012, 2013, 2014, 2016
6. Scientific Review Committee Award for Exceptional Service and Dedication, Vanderbilt-Ingram Cancer Center, 2011
7. Jacek Hawiger Award for Excellence in Teaching Graduate Students and Postdoctoral Fellows in the Classroom, Lecture, or Small Group Setting, Vanderbilt University, 2012
8. Member, Academy for Excellence in Education, Vanderbilt University School of Medicine, elected 2013
9. Gold Eagle Distinguished Alumni Award, Tamkang University, 2015
10. Merrill J. Egorin Outstanding Mentor Award, AACR/ASCO Methods in Clinical Cancer Research Workshop, Vail, CO, 2016
11. Fellow, American Association for the Advancement of Science (AAAS), elected 2016
12. Outstanding Reviewer, *Cancer* (top 2% of reviewers), 2015–2018
13. Outstanding Biostatistician Mentor Award, ECCO-AACR-EORTC-ESMO Workshop on Methods in Clinical Cancer Research, Zeist, Netherlands, 2018, 2019
14. Chang Wen Bao Honor Lecture Award, 2018
15. Honorary Doctoral Degree, National Cheng Kung University, 2018
16. Fellow, American Association for Cancer Research, elected 2022

PROFESSIONAL SOCIETIES

1. American Statistical Association (ASA)
2. American Association for the Advancement of Science (AAAS)
3. American Association for Cancer Research (AACR)
4. American Society for Clinical Oncology (ASCO)
5. European Society for Medical Oncology (ESMO)
6. International Biometric Society (IBS)

7. Institute of Mathematical Statistics (IMS)
8. Royal Society of Medicine (RMS)
9. Society for Clinical Trials (SCT)
10. Society for Epidemiologic Research (SER)
11. International Chinese Statistical Association (ICSA)
12. International Association for the Study of Lung Cancer (IASLC)

TEACHING: CLASSES, WORKSHOPS, SEMINARS, AND INVITED TALKS

A. At Vanderbilt

Vanderbilt-Ingram Cancer Center

Seminars

1. "Statistical Power and Sample Size Calculations," 1995
2. "The Analysis of Lifetime Data," 1995
3. "Analysis of Epidemiologic and Clinical Data," 1995
4. "Fundamentals of Clinical Trials," 1995
5. "Statistical Class-Prediction Model," 2001
6. "A Software Package for MALDI-TOF / Microarray Data Analysis," Cancer Proteomics & Genomics Program Seminar, 2005

On-Demand Course

7. "Data-Science Shared Resource (DSSR) Bioinformatics," 2022

Department of Preventive Medicine

Lectures

8. "Statistics and Epidemiology," 1995–1999
9. "Clinical Trials," 1998–2008
10. "Statistics in Medical Literature," 1999–2000

Seminars

11. "Statistical Issues and Analyses of a Study of the Use of Condoms in Urban, Low-Income, Minority Youth," 1994
12. "Longitudinal Analysis of Sinusoidality of Time-Qualified Data," 1996
13. "Statistical Issues and Analyses of a Study of the Risk Factors for Hospitalization in Well-Dialyzed Chronic Hemodialysis Patients," 1997
14. "Sample Size Determination for the Two-stage Design of a Phase II Cancer Clinical Trial with Correlated Unbalanced Binary Endpoints," 1998
15. "Dose Modification in a Phase II Clinical Trial with Toxicity Endpoints: Statistical Strategies for Analysis," 2000
16. "Randomized Controlled Trials," 2009, 2011–2012

Cancer Biostatistics Workshop, 1996–2001

Master of Public Health (MPH) Program Courses

17. "Clinical Trials" (MSCI 514-5504), 1996, 1998, 2000–2010
18. "Biostatistics I" (MPH 544-5502), 2012–2019

Department of Biomedical Informatics

Lectures

19. "Cluster Analysis," 2002
20. "Statistical Methods for Genomic/Proteomic Pattern Studies," 2002

Seminar

21. "Analysis of RNA Expression Patterns in Human Lung Cancer Using Flexible Compound Covariate Method," 2002

Master of Science in Clinical Investigation (MSCI) Program

Courses

22. "Clinical Trials" (MSCI-5504), 2003–2008, 2010–present
23. "Big Data in Biomedical Research" (MSCI-5033), 2015–present

Lecture

24. "Bioinformatics & Biostatistics in Clinical Proteomics Research," 2008

Department of Biostatistics Seminars

25. "Weighted Flexible Compound Covariate Method for Microarray and MALDI-TOF-MS Data Analysis," 2004
26. "On Mass Spectrometry Data Preprocessing Using Mathematical Tools and Statistical Techniques," 2004
27. "Biostatistics for Regulators and Politicians: Why Statisticians Need to Be Activists," 2010
28. "How to Consult Efficiently with Investigators – A Case Study of Clinical Trials," 2007
29. "Challenges and Opportunities for Biostatisticians: Why Biostatisticians Need to Be Activists!" 2011
30. "Emerging Methods in Biostatistics and Data Science: Prospects for the Future of Precision Medicine," 2016
31. "Analytical Challenges and Tasks for Big Data in Biomedical Research," Lightning Round Talks, 2016
32. "Stretching the Limits of Statistics: Integrative Data Science for the Precision Medicine Era," 2017
33. "Big Data, Smart Data, and Actionable Data in Precision Medicine," 2018
34. "A Novel Adjustment Method for Cox Proportional Hazards Model in Data with Long-Term Survival," 2019

Interdisciplinary Graduate Program Courses

35. "Statistical Analysis for High Dimensional Data," 2005
36. "Clinical Trials," 2012–2013

CRC Research Skills Workshops

37. "Clinical Trial Design," 2006, 2009–2010
38. "Interim Analysis in Clinical Trials," 2006
39. "Randomization in Clinical Trials," 2006

Eskind Biomedical Library Training Program Courses

40. "Clinical Trials," 2008
41. "Advanced Data Analysis with Case Studies," 2011
42. "Advanced Statistical Bioinformatics for Omics Research," 2012
43. "Meta-Analysis," 2013

Other

44. "Using and Understanding Medical Statistics," Department of Surgery Resident Training, 1997
45. "Understanding, Applying, and Not Misusing the Survival Analysis Techniques in Clinical Trials," Medical Oncology Division Seminar, 1997
46. "Statistical Methods for the Analysis of Biomedical Data," Nephrology Clinical Journal Club, 1997
47. "Statistical Issues in Clinical Research," Department of Surgery Resident Training, 2000
48. "Statistical Cluster Analysis for Gene-Expression Profiles," Bioinformatics Gene Expression/ Proteomics Analysis Seminar, 2001

49. “An Introduction to Cluster Analysis,” Statistical Genomics: Making Sense of All the Data Workshop, 2001
50. “Statistical Methods for Health Sciences,” Nephrology Clinical Conference, 2001
51. “Fundamentals of Clinical Trials,” Nephrology Clinical Conference, 2001
52. “Statistical Issues in Data Safety and Monitoring Committee,” General Clinical Research Center (GCRC), 2001
53. “Applying Cluster Analysis in Proteomics Research,” Proteomics Conference Workshop, 2002
54. "Design, Analysis and Interpretation of Microarray Data," Clinical Pharmacology Grand Rounds, 2002
55. “Statistical Methods for the Analysis of Microarray Data,” Nephrology Clinical Conference, 2003
56. “Data Reduction Approaches for High Dimensional Data Derived from High Throughput Assays,” Meharry Medical College/Vanderbilt-Ingram Cancer Center 5th Annual Retreat & Mini Symposium, 2004
57. “Data and Safety Monitoring: A Consumer’s Guide,” Clinical Pharmacology Grand Rounds, 2005
58. “On Actuarial Models and Survival Analysis for Cancer Patients,” Math Club Seminar, 2005
59. “Recent Development of Mass Spectrometry Data Processing Using Mathematical Tools and Statistical Techniques,” VICC and UABCC Inter-SPORE Biostatistics/Bioinformatics Workshop, 2005
60. “A Software Package for MALDI-TOF MS Data Preprocessing and Statistical Analysis,” Mass Spectrometry Research Center Seminar, 2005
61. “On Mass Spectrometry Data Preprocessing in Cancer Study,” Biomath Study Group Seminar, 2005
62. “Some Statistical Aspects of Oncology Phase II Trials,” Department of Medicine Seminar, 2006
63. “Novel Statistical Methods for Omics Research,” Lung Cancer Program Retreat, 2007
64. “Biomathematics & Bioinformatics in Tumor Micro-Environment Research,” Tumor Micro-Environment Network (VUTMEN) Seminar, 2007
65. “Statistical Issues in Clinical Trials,” Division of Hematology/Oncology Seminar, 2007
66. “Randomized Clinical Trials,” Internal Medicine Resident Course, 2012
67. “Bioinformatics,” CQS Summer Institute, 2014
68. “Big Data in Biomedical Research,” CQS Summer Institute, 2015–present
69. “Randomized Clinical Trials,” Department of Medicine Clinical Investigator Toolbox, 2016
70. “Emerging Methods in Data Science: Prospects of Precision Medicine,” Pulmonary Grand Rounds, 2017
71. “FDA Review of Human Clinical Trials,” Introduction to Clinical and Translational Research VICTR Course, 2017
72. Statistics tutorial, SyBBURE-Searle Program, 2017
73. Chair, Lightning Round, Data Science Visions Working Group, Data Science Symposium 2018.
74. “Big Data, Smart Data, Actionable Data in Precision Medicine,” Section of Surgical Sciences, 2018
75. “Big Data, Smart Data, Actionable Data in Precision Medicine,” Diabetes Research & Training Center, 2018
76. “Data Science and Biomedical Research,” Department of Radiology & Radiological Sciences, 2019
77. “Overview of Dose Finding Designs for Phase I Clinical Trials,” Division of Hematology and Oncology Journal Club, 2021
78. “What Keeps Me Awake at Night with ChatGPT,” Ethical Healthcare through Innovations in Biostatistics: Advancing Informative Analysis, Data Coordination, and Health Equity (Department of Biostatistics 20th anniversary symposium), 2023

B. Keynote Speeches

1. Taiwan Biotechnology Symposiums, 2000
2. Meeting of the Louisiana Chapter of the American Statistical Association, 2003
3. Biostatistics and Bioinformatics Workshop in High-Dimensional Data Analysis, Taipei, 2008
4. Japan Symposium on Innovation in Medical Research and Ethical Challenges, Tokyo, 2010
5. International Conference on Applied Statistics, Taipei, 2011
6. “Big Data, Omics, and Precision Medicine in Cancer.” 2nd International Conference on Translational Cancer Research, Tianjin, China, 2016

7. 27th Taiwan Statistics Conference, 2017
8. Taiwan Statistical Association Annual Meeting, 2018
9. 11th Formosan Medical Association—Taiwan Medical Week, Taipei, 2018
10. Supercomputing Asia Conference, Singapore, 2019
11. Chinese Society of Therapeutic Radiation Oncology (CSTRO) 16th Annual Meeting, Shenzhen, China, 2019
12. Multiomics and Precision Medicine Conference, Tainan, Taiwan, 2019
13. International Symposium on Application of Big Data in Prevention and Treatment of Cancer, Taiwan, 2020
14. Biobank Association Annual Meeting, Taiwan, 2020
15. International Conference on Recent Advances in Precision Medicine and Public-Private Partnership, Taiwan, 2021
16. "From Data Science to Data Intelligence—New Developments in Precision Medicine." Multiomics and Precision Medicine Joint Conference, Taipei, 2022
17. "Future of Investigational Medicine and Smart Data—What We Learned from ChatGPT." Taiwan Bureau of Foreign Trade Health+ Conference: Redefining the Digitalization of Future Healthcare, Taipei, 2023
18. "How to Get Your Research Published in High-Impact Journals: A Multidimensional Perspective." 10th Workshop of Current and Updated Development for Lung Cancer Immunotherapy, Beijing and online, 2024
19. "Clinical Trial Design and Biostatistics." Multidisciplinary Management of Lung Cancer Forum, National Cancer Center, Beijing, 2024
20. Keynote talk on "Precision health, inclusive medical care and information privacy protection in the era of substainable development." Sixth Annual Meeting of the Taiwan Human Biological Database Society, Taipei, 2024 (forthcoming, October)

C. Courses, Workshops, Seminars, and Invited Talks at Other Universities and Institutions

1. "Computer Packages" (BIOS 511). Course, University of Michigan, Ann Arbor, 1993, 1994
2. "Longitudinal Categorical Data Analysis Using Generalized Linear Models." Seminar, University of Pennsylvania, Philadelphia, 1994
3. "Some Aspects of Canonical Correlation Analysis." Seminar, Syntex Labs, 1994
4. "Incomplete Longitudinal Data Analysis Using Generalized Linear Models." Seminar, Middle Tennessee State University for the Middle Tennessee Chapter of the American Statistical Association, Murfreesboro, 1995
5. "Redundancy Analysis and Its Application to Canonical Analysis of More than Two Vector Variables." Seminar, Tamkang University, Taipei, 1995
6. "The Role of the Statistician in the Medical Research." Seminar, Tzu Chi Medical College, and National Tung Hua University, Hualien, Taiwan, 1995
7. "A Formula for a Missing Plot in a General Incomplete Block Design, When Recovery of Inter-block Information Is Used." Seminar, National Cheng Kung University, Tainan, Taiwan, 1995
8. "Statistical Strategies for Modeling the Quasi-Sinusoidality for Time-Qualified Data." Presentation, Technical University, Graz, Austria, 1999
9. "Weighted Three-Stage Cosigner Analysis of Quasi-Sinusoidality of Time-Qualified Data." Seminar, Tamkang University, Taipei, 1999
10. "Study Design and Statistical Issues in Clinical Trials." Clinical Trials Protocol Training Course, Bristol-Myers Squibb Inc., Princeton, Wallingford, and Brussels, 2000
11. "Statistics with Applications to the Clinical Trials." Lecture, Tamkang University, Taipei, 2000
12. "Statistics in Modern Molecular Biology: Protein and RNA Analysis." Lecture, Tamkang University, Taipei, 2000
13. "Statistical Methods in Longitudinal Data Analysis." Lecture, Tamkang University, Taipei, 2000
14. "Clustering Methods for the Analysis of Microarray and Protein Expression Data." Workshop given at the University of Alabama Comprehensive Cancer Center, Birmingham, 2001
15. Lecture, Joint Statistical Meetings (JSM) Invited Sessions Program, 2001
16. "Analysis of cDNA Microarray Expression Data in Human Lung Cancer Using Statistical Class-Prediction Model." Lecture, University of Alabama Comprehensive Cancer Center, Birmingham, 2001

17. International Chinese Statistical Association: Section on Recent Statistical Research in Cancer Studies: Invited Speaker, Philadelphia, 2002
18. “Statistical Methods for Analyzing the Microarray and Protein Expression Profile Data in Lung Cancer.” Lecture, University of Colorado (Lung SPORE meeting), Denver, 2002
19. “Analysis and Interpretation of Array Data.” Lecture, Education Session of Array and Gene Expression, 93rd American Association for Cancer Research Annual Meeting, San Francisco, 2002
20. “Analysis of RNA Expression Patterns in Human Lung Cancer Using Flexible Compound Covariate Method.” Lecture, Department of Biostatistics, School of Public Health, University of Alabama, Birmingham, 2002
21. “Analysis and Interpretation of Microarray Data.” Lecture, British Columbia Cancer Research Center, Vancouver, 2002
22. “Weighted Flexible Compound Covariate Method for Classifying Microarray Data.” Lecture, National Health Research Institutes, Taipei, 2002
23. “Design, Analysis and Interpretation of Microarray/MALDI-TOF Data.” Lecture, Taipei Veterans General Hospital, 2002
24. “Basic Study Design in Clinical Trials,” “Bias Reduction in Clinical Trials,” and “Trial Setup/Monitoring Considerations in Clinical Trials.” Courses, Bristol-Myers Squibb Protocol Training (online), 2002
25. “Quality Filtering: Critical Appraisal and Synthesis of Biomedical Literature.” Continuing education lecture, Medical Library Association Annual Meeting, San Diego, 2003
26. “Statistical Methods for Genomic/Proteomic Pattern Studies.” Lecture, Symposium of Molecular Taxonomy of Lung Cancer, 10th World Conference on Lung Cancer, International Association for the Study of Lung Cancer: Vancouver, 2003
27. “Tumor Proteomic/Genomic Patterns Predict Classification and Tumor Behavior in Human Non-small Cell Lung Cancer.” Seminar, Pennington Biomedical Research Center, Baton Rouge, 2003
28. “Statistical Issues in the Era of Proteomics and Genomics Research." Lecture, GI/Pancreas Inter-SPORE Meeting, Nashville, 2004
29. “Statistical Issues in the Combinations of the Targeted Therapies in Lung Cancer.” Lecture, Targeted Therapies for the Treatment of Lung Cancer Investigators’ Meeting, San Diego, 2004
30. “Bioinformatics Tools for High Dimensional Data Analysis.” Seminar, Division of Biostatistics of the National Health Research Institutes, Taiwan, 2004
31. “Analysis of Complex, Multivariate laboratory Data in Epidemiologic Research.” Lecture, International Epidemiology Institute Course on Molecular Epidemiology, Nashville, 2004
32. “Biostatistical Analyses of Proteomic and Microarray Data.” Lecture, International Epidemiology Institute Course on Molecular Epidemiology, Nashville, 2004
33. “Misclassification, Multiple Comparisons, and Sample Size Requirements.” Lecture, International Epidemiology Institute Course on Molecular Epidemiology, Nashville, 2004
34. “The Challenges of the Statistical Design, Analysis, and Interpretation for High Dimensional Data.” Lecture, Joint NCI-FDA Workshop on Research Strategies, Study Design and Statistical Approaches to Biomarkers Validation for Cancer Diagnosis and Detection, Washington, DC, 2004
35. “Clinical Trials.” AACR/ASCO Methods in Clinical Cancer Research Workshop, Vail, CO, 2004–2007
36. “Data Reduction Approaches for High Dimensional Data Derived from High Throughput Assays.” Lecture, International Society for Biological Therapy of Cancer 19th Annual Meeting, San Francisco, 2004
37. “Design and Analysis of Phase II Clinical Trials.” Lecture, Meharry Medical College MPH Program, Nashville, 2005
38. “Recent Development of Computational Research in Quantitative Biomedical Science: A Software Package for MS MALDI-TOF Data Processing.” Seminar, EPSCOR Mini-symposium, Murfreesboro, TN, 2005
39. “Mass Spectrometry Data Processing Using Wavelets.” Lecture, AMS Spring Southeastern Sectional Meeting, Bowling Green, KY, 2005

40. “Bioinformatics Tools for Analyzing the Genomic/Proteomic Data.” Lecture, Mouse Models of Human Cancers Consortium Annual Meeting, Nashville, 2005
41. “Bioinformatics, Biostatistics and Biomarkers.” Lecture, Mathematical Biosciences Institute (MBI) Workshop—Genomics, Proteomics, and Bioinformatics—Biomarkers in Cancer Research, Columbus, OH, 2005
42. “The Statistical Challenges for Genomic/Proteomic Data Analysis.” Lecture, ICSA Applied Statistics Symposium, Washington, DC, 2005
43. “Bioinformatics/Statistics/Mathematics and High Dimensional Data—From Genomic to Proteomic Research.” Lecture, Shanghai Cancer Research Center, Shanghai, 2005
44. “Science of Doing Science Biostatistics/Bioinformatics.” Seminar, University of Texas Southwestern Medical Center, Dallas, 2005
45. “Conquering Colorectal Disparities: Molecular Techniques & Examples of How They Can Be Used to Address Cancer Disparities.” Lecture, Meharry-Vanderbilt Alliance, Franklin, TN, 2005
46. “MALDI TOF MS Data Processing Using Wavelets, Splines, and Statistical Techniques.” Lecture, AMS Sectional Meeting, Western Kentucky University, Bowling Green, 2005
47. “Biostatistical and Bioinformatics Approaches in High Dimensional Data Derived from High Throughput Assays: A Consumer Guide.” Tutorial, 4th Asia Pacific Bioinformatics Conference, National Taiwan University, Taipei, 2006
48. “Statistical Challenges for Case-Cohort Study.” Seminar, Danish Cancer Society, Copenhagen, 2006
49. “Statistical Challenges in Genomic and Proteomic Cancer Research.” Lecture, Radiation Therapy Oncology Group (RTOG) Annual Meeting, Miami, 2006
50. “Biological Outcome Measures in Clinical Trials.” Education session lecture, 42nd ASCO Annual Meeting, Atlanta, 2006
51. “The Statistical Issues in Proteomics Data Analysis.” Seminar, University of Texas MD Anderson Cancer Center Bioinformatics Workshop, Houston, 2006
52. “Adaptive Trial Design and Data Analysis.” Seminar, Tokai University, Japan, 2006
53. “Clinical Trials.” Course, Tokai University, Japan, 2006
54. “A Lesson We Learn from the High Dimensional Data Generated from High Throughput Assays.” Seminar, Mayo Clinic, Rochester, MN, 2006
55. “The Statistical Challenges for Clinical Trials Design in High Dimensional Biomarkers.” Seminar, Duke University, Durham, NC, 2006
56. “The Wavelet-Based Algorithm for MALDI-TOF MS Data Pre-processing.” Seminar, Department of Statistics, National Cheng Kung University, Tainan, Taiwan, 2006
57. “Recent Development of Mass Spectrometry Data Processing Using Mathematical Tools and Statistical Techniques.” Seminar, Department of Statistics, Tamkang University, Taipei, 2006
58. “Multiscale Analysis and Proteomic Data Processing.” Joint presentation with Dr. Don Hong, 1st International Conference on Computational Systems Biology, FuDan University, Shanghai, 2006
59. “Introduction to Wavelets and Multiscaling Analysis.” Joint seminar with Dr. Don Hong, College of Sciences, Ningbo University, Ningbo, Zhejiang, China, 2006
60. “Introduction to Wavelets and Applications in Data Analysis.” Joint seminar with Dr. Don Hong, Department of Mathematical Sciences, Guangxi University of Nationalities, Nanning, China, 2006
61. “Wavelets and Applications in Proteomic Data Analysis.” Joint seminar with Dr. Don Hong, Department of Computer Informatics Science and Mathematics, Guilin University of Technology, Guangxi, China, 2006
62. “Multiscaling Techniques and PCA/ICA/EMD for Proteomic Data Processing and Biomarkers Discovery.” Joint seminar with Dr. Don Hong, Center of Artificial Intelligence and Applications, Beihang University, Beijing, 2006
63. “Proteomic Data Analysis Using Wavelets and Splines.” Joint seminar with Dr. Don Hong, Department of Mathematics, Central Florida University, Orlando, 2006
64. “Phase II Trial Design and Analysis.” Lecture, Meharry Medical College CRECD/MSCI Program, Nashville, 2006
65. Plenary lecture, NSF Workshop on Quantitative Proteomic Data Analysis, Murfreesboro, TN, 2007
66. “Clinical Trials.” Course, Tokai University, Isehara, Japan, 2007

67. “Statistical Challenges in Omic Data Analysis.” Seminar, Shanghai Jiaotong University Cancer Research Institute, 2007
68. “Biomarkers Clinical Trials Design and Analysis for High-Dimensional Data.” Seminar, Bioinformatics Center of Shanghai Institute of Biological Sciences (SIBS) & Chinese Academy of Sciences (CAS), 2007
69. “Missing Data Analysis—A Case Study of Denmark Childhood Cancer Survivors Cohort.” Lecture, 3rd GCCT Investigators Meeting, Nashville, 2007
70. “Wavelet Methods in Tumor Fingerprints Research.” Seminar, National Cheng Kung University, Taiwan, 2007
71. “High Dimensional Data Analysis.” Course, Tokai University, Isehara, Japan, 2007
72. “Science of Doing Science—Bioinformatics & Biostatistics: A Lesson We Learned from Omics Research.” Seminar, China Medical University School of Medicine, Taichung, Taiwan, 2008
73. “Biostatistical and Bioinformatics Approaches in High-Dimensional Data Derived from High Throughput Assays.” Seminar, China Medical University Biostatistics Center, Taichung, Taiwan, 2008
74. “Missing Data Analysis.” Workshop, China Medical University Biostatistics Center, Taichung, Taiwan, 2008
75. “Clinical Trials.” Workshop, China Medical University Biostatistics Center, Taichung, Taiwan, 2008
76. “Strategy of Multivariate Data Analysis.” Workshop, China Medical University Biostatistics Center, Taichung, Taiwan, 2008
77. “Advanced Clinical Trials Design and Analysis.” Course, Tokai University, Isehara, Japan, 2008
78. “The Challenges and Approaches in MALDI-TOF Experiment Design and Preprocessing Procedures.” Seminar, Nagoya University School of Medicine, Japan, 2008
79. “Novel Phase II Clinical Trials Design.” Lecture, AACR/ASCO Methods in Clinical Cancer Research Workshop, Vail, CO, 2008–2013
80. “Advanced Statistical Considerations: Things You Think You Can Do, But…” Lecture, ASCO 44th Annual Meeting, Educational Section of Advanced Concepts in Clinical Trial Design and Methodology, Chicago, 2008
81. “Design and Analysis of Clinical Trials—Concepts and Methodologies.” Seminar, Tokai University, Isehara, Japan, 2008
82. “Are We Ready to Be the New Sheriffs in Town? Some Issues of High Dimensional Data Analysis.” Seminar, Tamkang University, Taiwan, 2008
83. “Innovative Trial Design for Biomarkers Research.” Seminar, NCI Translational Science Meeting, Washington, DC, 2008
84. “High-Dimensional Data Analysis.” Course, Tokai University, Isehara, Japan, 2008
85. Lecture, Lung Cancer Symposium, Niagara-on-the-Lake, Ontario, Canada, 2008
86. Lecture, 2nd Adaptive Designs in Clinical Drug Development Conference, London, 2008
87. Lecture, Targeted Therapies for the Treatment of Lung Cancer Meeting, Santa Monica, 2008
88. “Adaptive Design: A Shortcut to Personalized Medicine?” Seminar, Adaptive Design in Clinical Drug Development Conference, London, 2009
89. “Challenges in Biostatistics, Bioinformatics, and Omics Research.” Seminar, National Cheng Kung University, Tainan City, Taiwan, 2009
90. “Advanced Clinical Trials Design and Analysis.” Course, Tokai University, Isehara, Japan, 2009
91. “Adaptive Design: A Shortcut to Personalized Medicine?” Seminar, Tokai University, Isehara, Japan, 2009
92. “Advanced Statistical Considerations: Things You Think You Can Do, But…” Lecture, 45th ASCO Annual Meeting, Educational Section of Advanced Concepts in Clinical Trial Design and Methodology, Orlando, 2009
93. “Advanced Clinical Trials.” Two-day workshop, FDA, 2009
94. “Adaptive Design: A Shortcut to Personalized Medicine?” Lecture, ADAPT Conference, Washington, DC, 2009
95. “A Novel Comprehensive Wave-form MS Data Processing Method.” Seminar, 2nd International Congress of Image and Signal Processing (CISP)/2nd International Conference on Biomedical Engineering and Informatics (BMEI), Tianjin, China, 2009

96. “The Omics Era and Its Impact on Biomedical Research: Are We Ready to Be the New Sheriffs in Town?” Seminar, Shanghai Center for Bioinformation Technology and Shanghai Jiao Tong University, 2009
97. “High Dimensional Data Analysis.” Course, Tokai University, Isehara, Japan, 2009
98. “A Shortcut to Personalized Medicine? The Power of Adaptive Designs.” Seminar, Adaptive Design in Clinical Drug Development Conference, London, 2010
99. “Adaptive Clinical Trials in the Era of Personalized Medicine.” Seminar, Tsukuba University, Ibaraki, Japan, 2010
100. “Omics Biomarkers Research: From Experimental Design to Data Analysis.” Lecture, 2nd Niagara Lung Cancer Symposium, Niagara-on-the-Lake, Ontario, Canada, 2010
101. “Quantitative Sciences Integration: Future Direction of Biomedical Research in the USA.” Lecture, Tokai University School of Medicine, Isehara, Japan, 2010
102. “High-Throughput Biomarker Adaptive Design—A Shortcut to Personalized Medicine?” Lecture, Adaptive Clinical Trials Conference, Washington, DC, 2010
103. “Advanced Statistical Considerations: Things You Think You Can Do, But…,” 46th ASCO Annual Meeting, Educational Section of Advanced Concepts in Clinical Trial Design and Methodology, Chicago, 2010
104. “Applied Biostatistics and Bioinformatics,” Five-day workshop, Shanghai Jiao Tong University, Shanghai, 2010
105. “Biostatistical Challenges in Omics Research.” Seminar, National Cheng Kung University, Tainan, Taiwan, 2011
106. “Teaching Biostatistics with Tangible and Interesting Examples.” Seminar, National Cheng Kung University, Tainan, Taiwan, 2011
107. “Design and Analysis of Translational Research.” Course, Creating Collaborative Research Ethics Education with Costa Rica, 2011
108. “Advanced Biostatistics.” Three-day workshop, Kitasato University, Tokyo, 2011
109. “US FDA Case Study.” Special lecture series, International Program for Clinical Research at Kitasato University, Tokyo, 2011
110. “Quantitative Sciences Integration in the Era of Personalized Medicine Research.” Seminar, International Conference on Applied Statistics, Taipei, 2011
111. “Rigorous Quantitative Sciences Integration—the Foundation of High-Dimensional Genomic Research.” Seminar, 4th International Symposium on Cancer Metastasis and the Lymphovascular System: Basis for Rational Therapy, New York, 2011
112. “Rigorous Trial Design and the Ethics of Drug Development—Case Studies from the US FDA and Duke Medical Center.” Lecture, National Yang-Ming University, Taipei, 2011
113. “Rigorous Quantitative Sciences Integration—the Foundation of Drug Approval in the Personal Genome Era.” Seminar, Emerging Information and Technology Conference (EITC), University of Chicago, 2011
114. “A Study of the Effect of Radiation Therapy on Mitochondrial DNA Mutation Using Next Generation Sequencing.” Seminar, 9th International Bioinformatics Workshop (IBW2011), Fourth Military Medical School, Xi’an, China, 2011
115. “Advanced Biostatistics.” Three-day workshop, Shanghai Jiao Tong University, China, 2011
116. “Early Phase Cancer Clinical Trials Workshop—A Road Map for Investigator Initiated Studies.” Symposium and three-day workshop, University of Malaya, Kuala Lumpur, 2011
117. “The Use of Next-Generation Sequencing Technology to Study the Effect of Radiation Therapy on Mitochondrial DNA Mutation.” Seminar, Tamkang University, Taipei, 2011
118. “Rigorous Trial Design and Ethics of Drug Development.” Seminar, National Tsing Hua University, Hsinchu, Taiwan, 2011
119. “Sample Size Calculation for Differential Expression Analysis of RNA-seq Data under Poisson Distribution.” Seminar, National Cheng Kung University, Tainan, Taiwan, 2011
120. “Advanced Biostatistics.” Course, Tamkang University, Taipei, 2011
121. “Omics Data Analysis: Present & Future—From the Era of Gigabyte Data to the Era of Petabyte Data: Are We Ready for the Next Generation Sequencing Data?” Seminar, National Cancer Center of Tokyo, 2012

122. “Omics Data Analysis: Present & Future—From the Era of Gigabyte Data to the Era of Petabyte Data: Are We Ready for the Next Generation Sequencing Data?” Seminar, 12th Annual Targeted Therapy of Lung Cancer Meeting, Santa Monica, 2012
123. “Methods in Cancer Research.” Five-day workshop, Al-Ahsa, Saudi Arabia, 2012
124. “The Challenges of the High-Density Biomarker Adaptive Trials.” Seminar, Adaptive Designs in Clinical Drug Development, London, 2012
125. “Statistical Bioinformatics Challenges for Clinical Trial Design in the Era of High-Density Data Analysis.” Seminar, AACR Annual Meeting, Chicago, 2012
126. “Advanced Biostatistics.” Five-day course, Beijing University, 2012
127. “Sample Size Calculation for Differential Expression Analysis of RNA-seq Data under Poisson Distribution.” Seminar, Indiana University Bloomington School of Informatics and Computing, 2012
128. “Emerging Methods of Quantitative Biology.” Seminar, Nordic Neuroendocrine Symposium, Nashville, 2012
129. “Introduction to Statistical Methods for High-Dimensional Data Analysis.” Seminar, Workshop for Chronic Disease Epidemiology and Prevention, China, 2012
130. “Recent Developments of the Statistical Bioinformatics Approaches to Designing and Analyzing Sequencing Data.” Seminar, International Workshop on Cancer Systems Biology, Jilin University, Changchun, China, 2012
131. “Novel Clinical Trial Designs in the Genomic Era.” Seminar, International Congress on Targeted Therapies in Cancer, Washington, DC, 2012
132. “Advanced Biostatistics with R.” Five-day course, Shanghai Jiao Tong University, 2012
133. “Adaptive Clinical Trial Design in the Era of High-Density Data Analysis.” Seminar, ADAPT Congress, Washington, DC, 2012
134. “Emerging Methods of Quantitative Biology.” Seminar, EITA-Bio (Emerging Information Technology Association conference), Princeton University, 2012
135. “Emerging Methods of Quantitative Biology.” Seminar, Moffitt Cancer Center Grand Rounds, Tampa, 2012
136. “Bioinformatics in Oncology Clinical Trials” and “Novel Phase II Design.” Seminars, Talent in Oncology Programme, Munich, 2012
137. “Emerging Methods of Quantitative Biology: What Are the Statistical Challenges?” Seminar, National Cheng Kung University, Tainan, Taiwan, 2013
138. “Novel Trial Design for Sequencing Biomarkers.” Seminar, Biomarkers Summit, London, 2013
139. “Emerging Methods of Quantitative Biology.” Seminar, FuDan University, Shanghai, 2013
140. “Big Data, Genomics, and Precision Medicine.” Seminar, Ohio State University Cancer Center, Columbus, 2013
141. “Advanced Biostatistics.” Three-day course, Beijing University, 2013
142. “Novel Clinical Trial Designs in the Era of High-Density Biomarker Data.” Presentation, Biomarkers Summit, London, 2013
143. “Novel Phase II Design.” Seminars, Talent in Oncology Programme, Amsterdam, 2013
144. “Advanced Biostatistics with R.” Five-day course, Shanghai Jiao Tong University, 2013
145. “Big Data and Biomedical Research: Where Do We Go from Here?” Seminar, Cancer Research and Biostatistics, Seattle, 2013
146. “Bioinformatics in Biomarker Discovery.” Seminar, Taipei Veterans General Hospital, 2013
147. “Sample Size Estimation for the RNA-sequencing Data.” Seminar, University of Pennsylvania, Philadelphia, 2013
148. “Clinical Trial Designs in the Genomic Era.” Seminar, 11th Annual International Congress on Targeted Therapies in Cancer, Washington, DC, 2013
149. “Statistical Bioinformatics Challenges in the Era of Personalized Medicine in Cancer.” Workshop, Roswell Park Cancer Institute, Buffalo, 2013
150. “Advanced Biostatistics.” Five-day course, Tamkang University, Taipei, 2013
151. “Genomics: From Research Tool to the Lung Cancer Clinic.” Lecture, 15th IASLC World Conference on Lung Cancer, Sydney, 2013
152. “Novel Phase I Trial Designs.” Presentation, 14th Annual Targeted Therapies of Lung Cancer Meeting, Santa Monica, 2014
153. “Advanced Biostatistics with R.” Three-day course, National Institute of Biological Sciences, Beijing, 2014

154. “Insights in the Era of Personalized Cancer Therapy and Targeted Therapies: How to Progress Through Well-Conducted Phase I and II Clinical Trials.” Presentation, AACR Annual Meeting, San Diego, 2014
155. “Computational Science: Leveraging Computer Data for Large Data Sets.” Presentation, 13th Annual Frontiers in Cancer Prevention Research Conference, New Orleans, 2014
156. “Bioinformatics in Oncology Clinical Trials” and “Reporting and Interpreting Statistics in Clinical Trial Research.” Seminars, Talent in Oncology Programme, Munich, 2014
157. “Big Data, Genomics, and Precision Medicine.” Presentation, Peking University (PKU) Big Data Brainstorm Workshop, Beijing, 2014
158. “Big Data for Precision Median and Biomarker Discovery.” Seminar, Albert Einstein College of Medicine, New York, 2014
159. “Emerging Methods of Quantitative Biology.” Seminar, 2nd International Symposium of Gunma University, Japan, 2014
160. “Statistical Challenges and Opportunities with Big Data.” Seminar, University of Michigan School of Public Health, Ann Arbor, 2014
161. “Bioinformatics for Dummies.” Presentation, 13th Round Asia Oncology Forum, Hong Kong, 2014
162. “Basic Statistics,” “Phase II Trial Designs,” and “Phase III Trial Designs.” Lectures, Methods in Clinical Research Workshop for Minority Physicians, Coral Gables, FL, 2014
163. “Big Data, Genomics, and Precision Medicine.” Seminar, Peking University, 2014
164. “Novel Phase II Trials.” Lecture, AACR/ASCO Methods in Clinical Cancer Research Workshop, Vail, CO, 2014
165. “The Challenges of the High-Density Biomarker Trials Design.” Presentation, Smart Trials Conference, London, 2014
166. “Advanced Biostatistics.” Four-day course, National Cheng Kung University, Tainan, Taiwan, 2014
167. “Fundamentals of Clinical Trials.” Web-based course, ASCO University, 2014, 2015
168. 5th International Workshop on Cancer Systems Biology, Jilin University, Changchun, China, 2015
169. “Data Science in the Era of the Precision Medicine.” Presentation, 40th Annual Congress of the Oncology Nursing Society (ONS), Orlando, 2015
170. “Advanced Biostatistics with R.” Five-day course, Shanghai Jiao Tong University, 2015
171. “Emerging Methods of Quantitative Biology.” Presentation, 12th Annual International Bioinformatics Workshop (IBW), Harbin, China, 2015
172. “Evaluating Well Designed vs. Poorly Designed Randomized Trials,” “Phase II Trial Designs in Oncology,” and “Biostatistics in Clinical Trials.” Lectures, Talent Oncology Program (TOP) workshop, Hong Kong, 2015
173. “Advanced Biostatistics.” Three-day course, National Institute of Biological Sciences, Beijing, 2015
174. “Big Data Analysis for the Uninitiated.” Presentation, AACR Annual Meeting, Philadelphia, 2015
175. “Big Data in Top Medical Journals: Quantitative Biology for Reproducible Research and Publishing with Integrity.” Presentation, Chinese Society of Clinical Oncology (CSCO) Annual Meeting, Xiamen, China, 2015
176. “Big Challenges of Big Data: Biomedical Science in the Petabyte Era.” Presentation, Pacific Rim Cancer Biostatistics Conference, Seattle, 2015
177. “Data Science in the Era of the Precision Medicine.” Seminar, Osaka University School of Medicine, Japan, 2015
178. “Phase III Trials,” “Phase II Trials,” and “Statistical Considerations in Clinical Trials.” Lectures, Methods in Clinical Research Workshop for Minority Physicians, Los Angeles, 2015
179. “Statistical Considerations in Protocol Development: From Hypothesis to Analysis.” Lecture, AACR/ASCO Methods in Clinical Cancer Research Workshop, Vail, CO, 2015
180. “Bioinformatics in Oncology Clinical Trials” and “Biomarkers in Clinical Trials: Statistical Considerations in Design and Evaluation.” Lectures, TOP workshop, Singapore, 2015
181. “Data Tsunami as a Limiting Step in Using the All Omics Approach.” Presentation, ESMO Asia Annual Meeting, Marina Square, Singapore, 2015
182. “Two-Stage Modified Toxicity Probability Interval Design for Low Target Toxicity Rate.” Joint presentation, JSM, Seattle, 2015

183. “Big Data, Genomics and Precision Medicine in Oncology Research,” “Novel Phase I and Phase II Cinical Trial Designs,” “Statistics 101,” and “The Challenges of High-Density Biomarker Adaptive Trials.” Talks, Canadian Oncology Resident Education, Canadian Lung Cancer Conference, Vancouver, 2016
184. “Novel Phase I and Phase II Clinical Trial Designs.” Presentation, BC Cancer Agency Research Conference, Vancouver, 2016
185. “Big Data, Omics, and Precision Medicine in Cancer Research.” Presentation, Chinese Society of Gynecology Oncology Annual Meeting, Beijing, 2016
186. “Clinical Trials Design Methods.” Two-part lecture, AACR Annual Meeting, New Orleans, 2016
187. “Basic Biostatistics,” “Phase II Clinical Trials,” and “Phase III Clinical Trials.” Three-day lecture, Roswell Park Cancer Institute: Methods in Clinical Research Workshop, Ft. Lauderdale, 2016
188. “The BETRNet Virtual Repository: A Key Network Resource for Collaboration.” Presentation, Barrett’s Esophagus Translational Research Network (BETRNet) Steering Committee Meeting, Rockville, MD, 2016
189. “Advanced Biostatistics with R.” Five-day course, Shanghai Jiao Tong University, 2016
190. “Novel Phase II Trials.” Lecture, AACR/ASCO Methods in Clinical Cancer Research Workshop, Vail, CO, 2016
191. “Biostatistics in Clinical Trials” and “Evaluating Well-Designed vs. Poorly-Designed Randomized Trials.” Presentations, Talent in Oncology Programme (TOP), Asia Fundamentals Meetings, Taipei, 2016
192. “Statistical Aspects of Omics Data Analysis Using the Random Compound Covariate.” Talk, 75th Annual Meeting of the Japanese Cancer Association (JCA): Breakthroughs in Cancer Treatment: Collaboration of Basic Translational and Clinical Research, Tokyo, 2016
193. “Advanced Biostatistics.” Five-day lecture, National Cheng Kung University, Tainan, Taiwan, 2016
194. Lecture, Targeted Therapies for the Treatment of Lung Cancer Meeting, Santa Monica, 2016
195. Lecture, Boehringer Ingelheim Meeting, Vancouver, 2016
196. Lecture, British Columbia Cancer Agency Grand Rounds, Vancouver, 2016
197. Lecture, ESMO Asia Congress, Singapore, 2016
198. “Biostatistics.” Web-based course, ASCO, 2016
199. “Biostatistics for Young Scientists.” Lecture, Roche Young Scientists Forum, Hong Kong, 2017
200. “Statistics in Oncology: Navigating Clinical Trials and Putting Data into Practice.” Lecture, McGill University Visiting Speakers in Oncology Program, Quebec, 2017
201. “Should the Anti-cancer Drugs Be Approved Based on the Non-randomized Single-Arm Trials?” Lecture, 17th Annual Targeted Therapies of Lung Cancer Meeting, Santa Monica, 2017
202. “Big Data, Omics, and Precision Medicine.” Lecture, AACR Annual Meeting, Meet-The-Experts Session, Washington, DC, 2017
203. “How to Interpret the Omics Big Data and Apply to the Clinical Practice.” Lecture, Global Breast Cancer Conference, Jeju Island, South Korea, 2017
204. “Advanced Biostatistics.” Five-day lecture, National Cheng Kung University, Tainan, Taiwan, 2017
205. “Advanced Biostatistics with R.” Five-day course, Shanghai Jiao Tong University, 2017
206. “Bioinformatics in Oncology: Principles and Application to Trials for Targeted Agents” and “Biostatistics: Statistical Controversies and Challenges in Reporting Clinical Trials.” Presentations, TOP Asia Fundamentals Meetings, Guangzhou, China, 2017
207. “Big Data, Omics, and Precision Medicine.” Lecture, Institute of Genetics and Molecular and Cellular Biology (IGBMC), Strasbourg, France, 2017
208. Lecture, Urological Association of Chinese Hospital Association Annual Meeting, Wuhan, 2017
209. Lecture, Boehringer Ingelheim Meeting, Vancouver, 2017
210. Lecture, San Antonio Breast Cancer Symposium, 2017
211. Lecture, 18th IASLC World Conference on Lung Cancer, Yokohama, Japan, 2017
212. Lecture, Institut de Génétique et de Biologie Moléculaire et Cellulaire (IGMBC), ILLKIRCH, Cédex, France, 2017
213. Lecture, Cancer Institute and Hospital, Chinese Academy of Medical Sciences: The Workshop of the Clinical Research and Statistical Challenges, Beijing, 2017
214. “Adaptive Clinical Trials: Overview 1,” “Adaptive Clinical Trials: Overview 2,” and “Adaptive Clinical Trials: Conclusion and Future Directions.” Web-based courses, HSTalks, 2017

215. “Common Statistical Errors and Mistakes in Cancer Research: How to Avoid Them.” Lecture, AACR Annual Meeting, Chicago, 2018
216. “Big Data, Smart Data, and Actionable Data in Precision Medicine.” Lecture, AACR Annual Meeting, Chicago, 2018
217. “Big Data, Smart Data, and Actionable Data in Precision Medicine.” Lecture, Taiwan Breast Cancer Consortium and German Breast Group Joint Meeting, Taipei, 2018
218. “Identifying Actional Targets—Bioinformatics.” Lecture, ESMO Congress, Munich, 2018
219. “Big Data, Smart Data, and Actionable Data in Precision Medicine.” Lecture, Fu Jen Catholic University, Taipei, 2018
220. “Debate: Which Is the Most Important Efficacy Endpoint in First Line Trials in Advanced NSCLC PFS or OS - Point of View.” Lecture, 19th IASLC World Conference on Lung Cancer, Toronto, 2018
221. “Shaping the Future of Precision Medicine and Healthcare.” Lecture, 3rd International Symposium on Translational Cancer Research, Tianjin, China, 2018
222. “Data Science in the Precision Medicine Era: Will Statisticians Lead or Follow?” Lecture, Department of Biostatistics, Columbia University, New York, 2018
223. “Bayesian 101” and “Bayesian Design—Challenges and Prospects.” Lectures, Paul Carbone Academy, Taipei, 2018
224. “REDCap and Open Science.” Lecture, National Cheng Kung University, Tainan, Taiwan, 2018
225. “*p*-value Estimation for the Risk Source of a Prediction Model.” Joint presentation, JSM, Vancouver, 2018
226. Lecture, Young Scientists’ Forum, Hong Kong, 2018
227. Lecture, Asia Super Computing Conference, Singapore, 2019
228. “Power in Multiple Testing: Sample Size Calculations for Differential Expression Analysis of RNA-seq data.” Lecture, Sample Size and Power Workshop for Basic, Translational, and Clinical Studies, AACR Annual Meeting, Atlanta, 2019
229. “Data Science: Shaping the Future of Precision Medicine and Healthcare” and “Big Data, Omics and Precision Medicine.” Lectures, Investigators’ and Site Coordinators’ Opportunity for Research Excellence (I-SCORE) Meeting, Rockville, MD, 2019
230. “Data Science in the Precision Medicine Era: Will Statisticians Lead or Follow?” Lecture, 3rd Pacific Rim Cancer Biostatistics Conference, Portland, OR, 2019
231. “From BioVU to All of Us: Shaping the Future of Precision Medicine and Healthcare.” Lecture, Beijing Summit on Data Science in Health, Beijing, 2019
232. “Complex Innovative Design.” Lecture, ESMO Targeted Anticancer Therapies Congress, Paris, 2019
233. “AI, Machine Learning, and Novel Statistical Methods in Cancer Research.” Lecture, Osaka University, Japan, 2019
234. “Big Data, Smart Data, and Actionable Data: Shaping the Future of Precision Medicine and Healthcare.” Lecture, Tokyo University, 2019
235. “Clinical Trial Design Workshop 2019.” Workshop, Thai Society of Clinical Oncology (TSCO), Phetchaburi, 2019
236. “Biostatistics for the Practicing Oncologist.” Lecture, TSCO Annual Meeting, Phetchaburi, 2019
237. “AI, Machine Learning, and Novel Statistical Methods in Biomedical Research.” Lecture, National Taiwan University, Taipei, 2019
238. “From All of Us to Amazon Care—The Future of Precision Medicine.” Lecture, Multiomics and Precision Medicine Conference, Tainan, Taiwan, 2019
239. “Bioinformatics: The Basics.” Lecture, 20th IASLC World Conference on Lung Cancer, Barcelona, 2019
240. Lecture, Quanta Smart Medicine Symposium, Taipei, 2019
241. Lecture, New Precision Healthcare Forum, Taipei, 2019
242. Lecture, Canadian Lung Cancer Conference, Vancouver, 2020
243. “Data Science in the Precision Health Era: Will Statisticians Lead or Follow?” Virtual seminar, University of Pennsylvania Department of Biostatistics, Epidemiology and Informatics, 2020
244. “scKWARN: Kernel-Weighted-Average Robust Normalization for Single-Cell RNA-seq Data.” Virtual seminar, Department of Biostatistics, SUNY Buffalo, 2020

245. “Current Use of RWD for Evidence Generation—Academia Perspectives” and “RWE generation in the 21st Century—Opportunities and Barriers.” Lectures, Asia Oncology Day virtual conference, 2020
246. “Impact of COVID-19 on Data Science and Precision Medicine.” Lecture, International Symposium on Application of Big Data in Prevention and Treatment of Cancer (virtual), 2020
247. “Biobank Data in Digital Healthcare: Lessons Learned from the US, UK, Sweden, and Denmark.” Lecture, Taiwan Biobank Association Annual Meeting (virtual), 2020
248. Lecture, Conference of Texas Statisticians (virtual), 2020
249. Lecture, 9th International Forum on Multidisciplinary Management of Lung Cancer, Beijing, 2020.
250. Lecture, 2020 BioTaiwan Committee (BTC) Meeting, Taipei, 2020
251. “Statistical Models.” Lecture, IASLC Targeted Therapies of Lung Cancer Meeting (virtual), 2021
252. “Current Use of RWD for Evidence Generation” and “The Core Aspects and Challenges in Clinical Trials Design of Precision Immunotherapy.” Lectures, Lung Cancer Precision Diagnosis and Treatment Forum (virtual), 2021
253. “A Simple Yet Powerful Method to Correct Misinterpretation of Clinical Trial Results with Long-Term Survival.” Lecture, Fiona and Stanley Druckenmiller Center for Lung Cancer Research at Memorial Sloan Kettering Cancer Center, 2021
254. “Immunotherapy Clinical Trials: Design and Endpoints.” Lecture, GOG Foundation Symposium—Cancer Immunotherapy: Successes, Challenges and New Frontiers (virtual), 2021
255. “Optimal Strategies for Designing Clinical Trials of Patients with Rare Mutations.” Lecture, Diamond Talk (virtual conference), 2021
256. “The Next Chapter of Precision Health: Leveraging and Integrating Real-World, Clinical, Omics, and Social Behavioral Data.” Lecture, International Conference on Recent Advances in Precision Medicine and Public-Private Partnership (virtual), 2021
257. “Machine Learning and Advanced Biostatistics in Health Data Science.” Five-day online course, Tamkang University, Taipei, 2021
258. Lecture, National Taiwan University Bioinformatics Center Data Division, Unveiling Ceremony and Symposium, 2021
259. “The Science of Doing Science: Lessons We Learned from Precision Medicine.” Virtual lecture, International Symposium on Biomedical Big Data and Precision Medicine (hybrid), 2022
260. “Design, Execution, and Practice of Clinical Trials.” Lecture, National Taiwan University, Data Office Consensus Camp (virtual), 2022
261. “Research on Rare Mutations in Lung Cancer.” Lecture, Roche Lung Cancer Innovation Summit—Special Conference for Rare Targets of Lung Cancer (virtual), 2022
262. “Panel of Alumni Chairs.” University of Michigan Biostatistics Turns 70, Ann Arbor, 2022
263. “A Practical Approach to Statistics for Junior Oncologists.” Lecture, Training in Lung Cancer (TLC) Meeting, Canadian Lung Cancer Conference, Vancouver, 2022
264. “Statistical Trial Design for Rare Molecular Subtypes.” Lecture, Canadian Lung Cancer Conference, Vancouver, 2022
265. “Challenges and Opportunities in Applied Mathematics, Statistics and Data Science for Cancer Research.” Lecture, 81st Annual Meeting of the Japanese Cancer Association (virtual), 2022
266. “Artificial Intelligence in Digital Pathology and Molecular Biology.” Lecture, ESMO Asia Congress, Singapore, 2022
267. “Challenges and Opportunities in Applied Mathematics, Statistics and Data Science for Cancer Research.” Seminar, Institute of Statistical Science (hybrid), 2022
268. “What Keeps Me Awake at Night Leading a Department of Biostatistics.” Lecture, ENAR (Eastern North American Region, International Biometric Society) Spring Meeting, 2023
269. “What Does a Biostatistician Really Think of Your Study and Why?” Panel, AACR Annual Meeting, 2023
270. “The Role of Biostatistics in an Increasingly Big Data/Data Science World.” Panel, National Institute of Statistical Sciences (webinar), 2023
271. “Practical Aspects of Novel Phase I Trial Designs Involving Laboratory Biomarkers.” Lecture, “The Road to Excellence: Meet the Clinical Study Experts” conference, Taiwan Medical University, 2023

272. “Big Data and Bioinformatics for Biomarker Discovery.” Lecture, World Conference on Lung Cancer, Singapore, 2023
273. “Novel Study Design and Analysis for Integrating Multi-omics Technologies for Early Detection of Cancer.” Lecture, ESMO Asia Congress, Singapore, 2023
274. “Advanced Biostatistics in Real-World Data with COVID-19 Research Examples.” Short course, Tamkang University, Taipei, 2023
275. “AllOfUs: Reflecting on Yesterday, Embracing Today, and Shaping Tomorrow.” Lecture, Taiwan Office of Science and Technology Policy, 2023
276. “Data-Driven Innovation: Navigating Preclinical Development and Translational Medicine in Drug R&D.” Lecture, Taiwan Development Center for Biotechnology, 2023
277. “How Biomedical Innovation Unlocks the Future of Smart Medicine: Navigating AI, Big Data, and Collaborative Medicine.” Lecture, Taiwan Industrial Technology Research Institute, 2023
278. “Biomarker Discovery and Validation in Modern Lung Cancer Research Era.” Lecture, Taiwan Lung Cancer Society (TLCS) International Symposium, 2024
279. “Biomarker Discovery and Validation in Modern Lung Cancer Research Era.” Lecture, Beijing Cancer Hospital, Thoracic Oncology Department, 2024
280. “Omics Data in the AI Era: Unveiling Statistical Advances and Challenges.” Lecture, Statistical Frontiers in the AI Era Conference, Taipei, 2024

D. Mentoring

1. Ayumi Shintani, PhD, Department of Biostatistics, Vanderbilt University School of Medicine (VUSM). Faculty mentor, 2001–2007.
2. Dercherng Lo, Department of Economics, Vanderbilt University (VU). PhD committee, 2003–2005.
3. Judith Dexheimer, Department of Bioinformatics, VUSM. PhD committee, 2006–2011.
4. Fei Ye, Department of Biostatistics and Epidemiology, University of South Carolina. MS committee, 2004. PhD committee, 2004–2007.
5. Elizabeth Kanter, Department of Biomedical Engineering, VU. PhD committee, 2005–2008.
6. Debbie Wujcik, Department of Nursing, University of Utah. PhD committee, 2005–2008.
7. Mark Harris, Departments of Mathematics and Cancer Biology, VUSM. PhD committee, 2008–2009.
8. Stephen Turner, Division of Human Genetics, VUSM. PhD committee, 2008–2010.
9. Terri T. Ni, PhD, Divisions of Genetic Medicine/Cardiovascular Medicine, VUSM. Faculty mentor, 2003–2009.
10. Andrew Yi, PhD, Division of Genetic Medicine, VUSM. Faculty mentor, 2007–2008.
11. Joshua Smith (MD), Department of Cell and Developmental Biology, VUSM. PhD Committee, 2009–2010.
12. Benjamin Grady, Division of Human Genetics, VUSM. PhD qualifying exam committee, 2009. PhD committee, 2009–2012.
13. Zeqiang Ma, Department of Biomedical Informatics, VUSM. PhD committee, 2010–2012.
14. Olivia Veatch, Division of Human Genetics, VUSM. PhD qualifying exam committee, 2010.
15. Emily Holzinger, Division of Human Genetics, VUSM. PhD qualifying exam committee, 2010.
16. Mayur Patel, MD, Division of Trauma and Surgical Critical Care, VUSM. Fellow mentoring committee, 2011–2017.
17. Bingshan Li, PhD, Division of Human Genetics, VUSM. Faculty mentor, 2012–2018.
18. Carlos Lopez, PhD, Department of Cancer Biology, VUSM. Faculty mentor, 2012–2022.
19. Qi Liu, PhD, Departments of Biostatistics and Biomedical Informatics, VUSM. Faculty mentor, 2012–present.
20. Isaac Pence, Department of Biomedical Engineering, VU. Dissertation committee, 2013–2016.
21. Yan Guo, PhD, Department of Cancer Biology, VUSM. Faculty mentor, 2013–2017.
22. David Smith, PhD, Department of Radiology and Radiological Sciences, VU. K25 grant mentor, 2013–2018.

23. Michelle Ormseth, MD, MSCI, Department of Rheumatology, VUSM. Faculty mentor, 2014–present.
24. Quanhu Sheng, PhD, Department of Biostatistics, VUSM. Faculty mentor, 2014–present.
25. Xue Zhong, Department of Biostatistics, VUSM. MS advisor, 2014–2015.
26. Xiao Dong, PhD, Department of Genetics, Cell Biology and Development, University of Minnesota, Twin Cities. K99 mentor, 2014–2020.
27. Alicia K. Morgans, MD, Division of Hematology/Oncology, VUSM. Faculty mentor, 2015–2017.
28. Anthony Daniels, MD, MSc, Department of Ophthalmology and Visual Sciences, VUSM. Co-mentor, 2016–present
29. Danxia Yu, PhD, Division of Epidemiology, VUSM. Faculty mentor, 2016–present.
30. Derek K. Smith, PhD, Department of Biostatistics, VUSM. Faculty mentor, 2017–present.
31. Jun Qian, Department of Biostatistics, Middle Tennessee State University. MS mentor, 2017.
32. Ryan Hsi, MD, Department of Urologic Surgery, VUSM. Faculty mentor, 2017–present.
33. Cheryl L. Gatto, PhD, PMP, Department of Biostatistics, VUSM. Faculty mentor, 2019–2023.
34. Simone Herzberg, Medical Scientist Training Program, VUSM. Biostatistics mentor, 2022–present.
35. Kimberly Albert, PhD, Vanderbilt Center for Cognitive Medicine. Clinical design and biostatistics mentor, 2022–present.
36. Chih-Ting Yang, Department of Biostatistics, VUSM. PhD mentor, 2023–present.
37. Amir Asiaee, PhD, Department of Biostatistics, VUSM. Faculty mentor, 2023–present.
38. Hui Nian, PhD, Department of Biostatistics, VUSM. Faculty mentor, 2024–present.
39. Chia-Jung Chang, Visiting Student Observer, VUSM. Research mentor, 2023–2024.
40. Kuo-Jung Lee, PhD, Visiting Scholar, VUSM. Host mentor, 2024–2025.
41. Jo-Ying Hung, Visiting Student Observer, VUSM. Research mentor, 2024–2025.

SERVICE

A. I have refereed papers for the following journals:

1. *Science*
2. *New England Journal of Medicine*
3. *Journal of the American Statistical Association*
4. *Bioinformatics*
5. *Communications in Statistics*
6. *Biometrical Journal*
7. *American Medical Informatics Association*
8. *Information Sciences: An International Journal*
9. *Cancer* (**Editorial Board Member**)
10. *Cancer Research*
11. *Southern Medical Journal*
12. *Arteriosclerosis, Thrombosis, and Vascular Biology*
13. *International Chinese Journal of Dentistry* (**Editorial Board Member**)
14. *Clinical Pharmacology and Therapeutics*
15. *Journal of Concrete and Applicable Mathematics* (**Guest Editor with Prof. Don Hong)**
16. *BMC Bioinformatics*
17. *Clinical Cancer Research* (**Editorial Board Member**)
18. *Technology in Cancer Research and Treatment*
19. *Proteomics*
20. *Proceedings of the National Academy of Sciences*
21. *Cancer Prevention Research Journal* (**Editorial Board Member**)
22. *Computational Statistics and Data Analysis*
23. *Journal of Applied Statistics*
24. *Biological Procedures Online* (**Editorial Board Member**)
25. *Clinical Trials*
26. *Journal of Clinical Oncology*
27. *Carcinogenesis*
28. *Science Translational Medicine*

29. *Proteomics—Clinical Applications*
30. *Dataset Papers in Medicine*
31. *PLoS ONE* (**Statistical Advisory Board Member)**
32. *Journal of Thoracic Oncology* (**Associate Editor**)
33. *Journal of Computational Systems Biology* (**Editorial Board Member**)
34. *Journal of Nuclear Medicine* (**Editorial Board Member**)
35. *JAMA Oncology* (**Associate Editor**)
36. *Quantitative Biology* (**Editorial Board Member**)
37. *JNCI* (**Editorial Board Member**)
38. *JNCI Cancer Spectrum* (**Editorial Board Member**)
39. *Nature Communications*
40. *Translational Cancer Research* (**Editorial Board Member**)
41. *Science Bulletin* (**Editorial Board Member**)

B. American Association for Cancer Research (AACR)

Annual Meeting Program Committee

- Clinical Research Subcommittee: Biostatistics in Clinical Trials Section Chair, 2008 and 2014
- Scientific Program Committee: Member, 2011
- Clinical Trials Committee: Member, 2017–2021
- Vice Chair, 2021–2022

Standing Committees

- Education and Training Committee: Member, 2015–2021
- Career Development and Mentor Committee for Early-Stage Faculty: Chair, 2016
- Science Education and Career Advancement Committee: Member, 2017–2018
- Precision Combination Therapy Task Force: Member, 2021–2023
    - Education Subcommittee Member, 2022
- Landmarks in Cancer Research (2017–2022) Committee: Member, 2022
- Cancer Progress Report Steering Committee: Member, 2022
- International Affairs Committee: Member, 2022–2023
- Margaret Foti Award Committee: Member, 2023–2025
- Clinical Trials Oversight Committee, 2023–present
- Data Science Task Force, 2024–present

Workshops

- AACR/ASCO Methods in Clinical Cancer Research Workshop
    - Invited faculty, 2004–2016
        - Highest-rated lecturer in 2010, 2012, 2013, 2014 and 2016
        - Merrill J. Egorin Outstanding Mentor Award, 2016
    - Co-director, 2014–2016
    - Co-author, Von Hoff DD, Clark GM, Coltman CA et al. A grant-based experiment to train clinical investigators: the AACR/ASCO Methods in Clinical Cancer Research Workshop. *Clin Cancer Res* 2021;27(20):5472-5481. doi:10.1158/1078-0432.CCR-21-1799
- ECCO-AACR-EORTC-ESMO Workshop on Methods in Clinical Cancer Research: Invited Faculty, 2018–2019. Outstanding Biostatistician Mentor, 2018 and 2019
- EORTC-ESMO-AACR Workshop on Methods in Clinical Cancer Research: Program Committee Member, 2021–2022. Invited Faculty, 2022–present

- Robert A. Winn Diversity in Clinical Trials Award Program: BMSF-AACR Design and Implementation of Clinical Trials Workshop. Co-director, 2021–present

Presentations at AACR annual meetings include:

- "Analysis and Interpretation of Array Data," 2002
- "Clinical Trial Design Workshop Part 1: A Journey from Classical to Innovative Approaches" (panel), 2008. Also participated in this conference as invited faculty
- "Clinical Trial Design in the Era of High-Density Data Analysis" (session chair), 2012
- "Statistical Bioinformatics Challenges for Clinical Trial Design in the Era of High-Density Data Analysis," 2012
- "Insights in the Era of Personalized Cancer Therapy and Targeted Therapies: How to Progress Through Well-Conducted Phase I and II Clinical Trials," 2014
- "Big Data Analysis for the Uninitiated," 2015
- "Clinical Trials Design Methods," 2016
- "Big Data, Omics, and Precision Medicine" (Meet-The-Experts Session), 2017
- "Big Data, Smart Data, and Actionable Data in Precision Medicine," 2018
- "Common Statistical Errors and Mistakes in Cancer Research: How to Avoid Them" (chair and speaker), 2018
- "Power in Multiple Testing: Sample Size Calculations for Differential Expression Analysis of RNA-seq data," 2019
- "Design and Analysis of Real-World Data for Cancer Research" methods workshop, 2022
- "Integration of Complex Data and Diversity to Achieve Equity" (in the "Decoding Cancer Health Disparities" plenary), 2022
- "What Does a Biostatistician Really Think of Your Study and Why?" 2023

AACI/AACR/ASCO Capitol Hill Lobby Day: Member, 2009–2010

International Conference on Frontiers in Cancer Prevention Research: Scientific Committee Member, 2003 and 2009

Minority and Minority-Serving Institution Faculty Scholar, 2017

NextGen Star: Applicant Reviewer, 2017

Major Symposium: Integrative Data Science for the Precision Medicine Era: Chair, 2018

Exploratory IND/Phase 0 Clinical Trials Task Force: Member, 2021–present

Daniel D. Von Hoff Award for Outstanding Contributions to Education and Training in Cancer Research Award Committee: Member, 2021–present

ESMO-AACR Joint Symposium, "Data Science and Artificial Intelligence," ESMO Asia Congress: Co-chair and invited speaker, 2022

ESMO-AACR Joint Session, "Early Detection of Cancer," ESMO Asia Congress: Co-chair and invited speaker, 2023

C. National Cancer Institute

1. NCI Study Section Special Emphasis Panel (SEP) (ZCA1 SRRB-X (CC)): Member, 1999
2. NCI Subcommittee D-Clinical Studies Review Panel (P01-CA72008-04): Member, 2000
3. NCI Subcommittee E-Cancer Epidemiology, Prevention & Control Studies Review Panel (P01-CA88961-01): Member, 2000

4. NCI P50 Cancer Center Support Grant (CCSG) Review Panel (University of Wisconsin, Madison): Member, 2000
5. NCI Subcommittee E-Cancer Epidemiology, Prevention & Control Studies Review Panel (NCI-E GRB-R(Y)): Member, 2001
6. NCI Subcommittee C-Basic and Preclinical Review Panel (NCI-C GRP-P (Q2)): Member, 2001
7. NCI 9th SPORE Investigators' Workshop: Invited Speaker, 2001
8. NCI Lymphoma SPORE Review Panel: Member, 2002
9. NCI Lung SPORE Annual Meeting, Denver, Colorado, Session of Methods of Array Analysis: Chair, 2002
10. NCI PO1-CA096888-01C4 "Molecular Gene and Radiation Therapies for Cancer": Site Visit Reviewer, 2002
11. NCI Biology and Transplantation of Human Stem Cell SEP (ZCA1 GRB-W(01)): Member, 2002
12. NCI Subcommittee E-Cancer Epidemiology, Prevention & Control Review Panel (NCI-E GRB-P (K2)): Member, 2002
13. NCI Subcommittee C—Basic & Preclinical Review Panel (NCI-C GRB-P (K1)): Member, 2002
14. NCI PO1-CA100336-01 Review Panel, "Molecular Targets in Prostate Cancer": Member, 2002
15. NCI Pancreatic SPORE Review Panel: Member, 2003
16. NCI PO1 CA 104668-01 Review Panel, "Mechanism-Based Approach for the Management of Prostate Cancer" (NCI-C GRB-P (X8)): Member, 2003
17. NCI Ovarian & Breast SPORE Review Panel: Member, 2003
18. NCI PO1 CA 104106-01 Review Panel, "Signaling and Progression in Prostate Cancer" (NCI-C GRB-R (C2)): Member, 2003
19. NCI Leukemia & Lymphoma SPORE Review Panel: Member, 2003
20. NCI Developmental Therapeutics Study Section: Member, 2003–2008
21. NCI UO1 CA 107948-01 Review Panel, "The Pediatric Brain Tumor Consortium" (NCI–ZCA1 GRB-F (J1)): Member, 2003
22. NCI Subcommittee D—Clinical Studies PO1 CA112359-01 Review Panel, "New Approaches to the Treatment of Neuroblastomas" (NCI-D RPRB (S3)): Member, 2004
23. NCI Subcommittee A—Cancer Centers Review Panel (NCI-A RTRB-Z (E1)), 2004
24. NCI P50 CCSG Review Panel (University of Pennsylvania Comprehensive Cancer Center): Member, 2004
25. NCI GI/Pancreas Inter-SPORE Meeting: Section of Data Analysis: Chair, Nashville, 2004
26. NCI GI/Pancreas Inter-SPORE Meeting: Invited Speaker, Nashville, 2004
27. NCI Clinical Oncology Study Section: Ad Hoc Member, 2005
28. NCI Ovarian-GYN Cancer SPORE Review Panel: Member, 2005
29. NCI P50 CCSG Review Panel (University of Colorado Comprehensive Cancer Center): Member, 2005
30. NCI Etiologic and Early Marker Studies (EEMS) Review Panel: Member, 2005–present

31. NCI Avon Breast Cancer Research Review Panel: Member, 2005
32. NCI PO1 Experimental Therapeutics Cluster Review Panel: Member, 2005
33. NCI ZCA1 GRB-S (01) Centers of Cancer Nanotechnology Excellence (CCNE) SEP: Member, 2005
34. NCI ZRG1 ONC-J (02) M: COX-2 Inhibition of T-Cells in Human Lung Cancer. Center for Scientific Review SEP: Member, 2005
35. NCI Translational Research Workshop Group (TRWG): Invited Speaker, 2006
36. NCI Intramural Program: Biostatistics Branch Review Panel: Member, 2006
37. NCI SPORE Breast Cancer Research Review Panel: Member, 2006
38. NCI Avon Breast Cancer Research Review Panel: Member, 2006
39. NCI L30 and L40 SEP: Member, 2006–2009
40. NCI Discovery and Development SEP: Member, 2006–2007
41. NCI SPORE Standing SEP: Member, 2007–present
42. NCI Workshop on Implementation of Biomarkers Evidence in Translational Research Organizing Committee: Member, 2007
43. NCI P50 CCSG Review Panel (Kimmel Cancer Center at Thomas Jefferson University): Member, 2007
44. NCI Avon Progress for Patients Blue Ribbon Panel Advisory Board: Member, 2007
45. NCI/NIH Cancer Genome Atlas (TCGA) Data Portal Use Workshop: Invited Participant, 2008
46. NCI Comprehensive Systems Genetics of Cancer SEP: Member, 2008
47. NCI P01 Molecular Oncology SEP: Member, 2008
48. NCI Translational Science Meeting: Invited Speaker, 2008
49. NCI Subcommittee J—Population and Patient-Oriented Training Study Section: Member, 2008–2009
50. NCI ZCA1 RTRB-2 Career Development Awards Panel: Member, 2008
51. NCI P01 Molecular Oncology (Basic, Translational, and Clinical Studies) SEP: Member, 2009–2010
52. NCI P50 CCSG Review Panel (Pennsylvania State Cancer Center): Member, 2010
53. NCI Gastrointestinal Cancers SEP: Member, 2010
54. NCI SBIR Phase II, Integrating Patient-Reported Outcomes in Hospice and Palliative Care Practices, Study Section: Chair, 2010
55. NCI LRP Review Panel: Member, 2011
56. NCI Cancer Diagnostics and Treatments SBIR/STTR Review Panel: Member, 2011
57. NCI P50 CCSG Review Panel (Maryland Greenebaum Cancer Center): Member, 2011
58. NCI P50 CCSG Review Panel (University of Virginia Cancer Center): Member, 2011
59. NCI P50 CCSG Review Panel (Johns Hopkins Kimmel Cancer Center): Member, 2011, 2016
60. NCI P01 ZCA1 GRB-T (M1) SEP: Member, 2012
61. NCI P30 CCSG Review Panel (New York University Cancer Institute): Member, 2012
62. NCI P30 CCSG Review Panel (Kimmel Cancer Center at Thomas Jefferson University): Member, 2012

63. NCI P30 CCSG Review Panel (University of Chicago Comprehensive Cancer Center): Member, 2012
64. NCI Cancer Immunopathology and Immunotherapy (CII) Study Section: Member, 2013–2017
65. NCI P30 CCSG Review Panel (Fred Hutchinson/University of Washington Consortium): Member, 2014
66. NCI P30 CCSG Review Panel (University of Texas Health Science Center at San Antonio [UTHSCSA]): Member, 2014
67. NCI P30 CCSG Review Panel (Cold Spring Harbor Laboratory Cancer Center): Member, 2016
68. NCI P30 CCSG Review Panel (Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins University): Member, 2016
69. NCI ZCA1 RPRB-N (O)1 SEP; SPORE Review: Member, 2017
70. NCI P30 CCSG Review Panel (Hawaii Cancer Center): Member, 2018, 2024
71. NCI CTEP Early Drug Development (EDD) and Investigational Drug Steering Committee (IDSC): Member, 2019–present
72. NCI P30 CCSG Review Panel (University of Pennsylvania Comprehensive Cancer Center): Member, 2020
73. NCI Developmental Therapeutics (DT) Study Section: Member, 2021
74. NCI P30 CCSG Review Panel (Wake Forest Baptist Medical Center Comprehensive Cancer Center): Member, 2021
75. NCI Office of Sponsor and Regulatory Oversight: Thoracic Committee Member and Data Safety and Monitoring Board Biostatistician, 2022

D. American Statistical Association

1. International Science and Engineering Fair (ISEF): Special Awards Judge, 1997
2. Mid-Tennessee Chapter: Council Representative, 1998–1999
3. Mid-Tennessee Chapter: President, 1999
4. Council of Chapters Governing Board: Vice Chair, 2002–2004
5. Council of Chapters Nominations Committee: Member, 2004–2005

E. Robert A. Winn Diversity in Clinical Trials Career Development Award (Winn CDA) Program

- Lecturer, 2021–present (orientation and scholar forums)
    - Statistical Principles in Clinical Trials
    - Statistical Methods in Epidemiology
    - Biostatistics I and II
- Program Co-director, Design and Implementation of Clinical Trials Workshop, 2021–present

F. Other

1. Society for Epidemiologic Research: Annual Meeting Abstracts Reviewer, 1997–1999
2. VICC Clinical Breast Cancer Journal Club: Statistical Commentator, 1998–present
3. Vanderbilt University Chinese Student Association: Advisor, 1998–2002
4. 1998 Chinese Youth Goodwill Mission from Taiwan: Co-sponsor, 1998
5. U.S. Army Medical Research and Materiel Command (USAMRMC) Breast Cancer Research Program (BCRP): Scientist Reviewer, Epidemiology, 1999

6. International Biometric Conference, Berkeley, Section of Correlated Binary Data: Chair, 2000
7. JSM Invited Sessions Program: Section on Statistical Consulting: Organizer, 2001
8. IASLC/ASCO Consensus Conference on Bronchioloalveolar Cell Carcinoma: Invited Panelist, New York, 2004
9. Targeted Therapies for the Treatment of Lung Cancer Investigators' Meeting: Invited Faculty, Steamboat Springs, CO, 2005
10. Mathematical Biosciences Institute (MBI) Workshop—Genomics, Proteomics, and Bioinformatics—Biomarkers in Cancer Research: Invited Faculty, Columbus, OH, 2005
11. ICSA Applied Statistics Symposium: Invited Faculty, Washington, DC, 2005
12. Spline and Wavelet Applications in Biostatistics and Actuarial Mathematics (with Dr. Don Hong). Invited Presentation and Mini-Symposium Organizer, Athens, GA, 2005
13. 47th Anniversary Annual Conference, American Association for Chinese Studies: Chair and Local Organizing Committee Member, Nashville, 2005
14. Hawaii International Conference on Statistics, Math, and Related Fields: Abstract Reviewer, Section Chair, Honolulu, 2007
15. 6th-Sino-Japan-Korea Bioinformatics Training Course: Invited Faculty, Shanghai, 2007
16. Susan G. Komen Foundation Promise Grant: Program Reviewer, Washington, DC, 2008
17. ENAR, Panel on Genomics and Microarray Analyses: Chair, Arlington, VA, 2008
18. Biostatistics and Bioinformatics Workshop on High-Dimensional Data Analysis: Co-Organizer, Taipei, Taiwan, 2008
19. Susan G. Komen for the Cure's Promise Grants Scientific Peer Review Committee: Member, 2008–2012
20. ASCO Cancer Research Committee: Member, 2008–present
21. Canadian Cancer Society Research Institute Program Project Review Panel: Member, 2009
22. Susan G. Komen for the Cure Targeted Therapies (TT2) Grant: Review Panel Member, 2009
23. Cancer Society Research Institute, Review Panel for the Canadian Breast Cancer Research Alliance Special Research Competition on Predictive Oncology, Member, 2010
24. Susan G. Komen for the Cure Research Programs Grant: Review Panel Member, 2011
25. ASCO Cancer Foundation Grants Selection Committee: Member, 2010–present
26. 4th International Symposium on Cancer Metastasis and the Lymphovascular System: Basis for Rational Therapy: Biomarkers and Informatics: Session Chair, 2011
27. Aduro BioTech CRS-207 & GVAX Pancreas Vaccine with Cyclophosphamide Study Data and Safety Monitoring Committee: Member, 2011
28. Immunogen Data Safety and Monitoring Board: Member, 2012
29. Chicago Thoracic Symposium: Abstract Reviewer, Program Committee Member, and Chair of Keynote Lectures, 2012
30. Methods in Cancer Research Workshop, Al-Ahsa, Saudi Arabia: Scientific Committee Member, 2012
31. International Conference on Intelligent Biology and Medicine: General Chair, 2012–2013
32. Brain Tumour Charity: Peer Review Committee Member, 2013
33. Grand Rounds, Roswell Park Cancer Institute: Invited Speaker, 2013

34. International Clinical Trials Workshop (ICTW) Working Group: Member, 2014–2017
35. Roche pRED Data Monitoring Committee (DMC) of the MDM2 Phase 2/3 Trial in AML Patients: Member, 2014
36. Peking University (PKU) Big Data Brainstorm Workshop: Chair, 2014
37. Institute of Medicine (IOM) Committee on Policy Issues in the Clinical Development of Biomarkers for Molecularly Targeted Therapies: Member, 2014–present
38. Pacific Rim Cancer Biostatistics Conference: Chair, "Phase III Trials," Seattle, 2015
39. MMY3004 Interim Analysis Meeting, Vienna, 2015
40. EITA-Bio, Taipei: Program Steering Committee Member, 2015
41. South Big Data Hub Meeting, Georgia Tech Global Learning Center, Atlanta, 2015
42. Roche WO29519 Constitutional Independent DMC Meeting, Barcelona, 2016
43. Ontario Institute for Cancer Research (OICR) Translational Research Initiatives: Hospital for Sick Children, Neurosurgery, Biostatistical Reviewer, Canada, 2016
44. Ontario Institute for Cancer Research (OICR) Translational Research Initiatives: Princess Margaret Cancer Centre and Ottawa Hospital Research Institute, Immuno-oncology, Biostatistical Reviewer, 2016
45. ASCO International Clinical Trials Workshops (ICTW), Luoyang, China: Chair, Course Director, and Invited Speaker, 2017
46. AMIA Annual Symposium: Reviewer, 2017
47. ASCO Annual Meeting Scientific Program Committee-Biostatistics: Member, 2017
48. Shanghai Jiaotong University Summer Institute Statistical Workshop: Course Director, 2017
49. Springer Nature: Beyond Developing Clinical Trials: Successful Communication of Your Research, Guangzhou, China: Invited Faculty, 2017
50. Tamkang University Statistical Workshop: Course Director, 2017
51. 2nd Pacific Rim Cancer Biostatistics Workshop, Kanazawa, Japan: Co-chair, 2017
52. IALSC Targeted Therapies of Lung Cancer Meetings, Santa Monica: Invited Faculty, 2018–2020; Poster Mentor, 2024
53. BETRNet Steering Committee Annual Meeting, Philadelphia: Session Leader, 2018
54. BETRNet Steering Committee Annual Meeting, Ann Arbor: Session Leader & Invited Speaker, 2019
55. North American Biostatistics Chairs Virtual Annual Business Meeting, Facilitator: Remote Working Options, 2022
56. Roche Lung Cancer Innovation Summit—Special Conference for Rare Targets of Lung Cancer: Invited Speaker and Chair, virtual meeting, 2022
57. National Institute for Health and Care Research: Reviewer, 2023
58. AI Optimization and Forecasting in the Digital Era—Theory, Methods, and Algorithms (Germany/Singapore International Research Training Group): Advisor, 2023–present
59. IASLC World Conference on Lung Cancer: Statistician Reviewer, 2024

COMMITTEES

Vanderbilt University

1. Faculty Senate: Member, 2004–2007
2. Community Giving Campaign Allocations Committee: Member, 2006–2007
3. Senate Consultative Committee: Member, 2007
4. Academic Policies and Services Committee (APS): Member, 2004–2007
5. ACCRE Steering Committee: Member, 2015–present
6. Data Science Visions Working Group: Co-chair, 2017–2018
7. Executive Committee of Executive Faculty: Member, 2018–2020

Vanderbilt University School of Medicine

8. Vanderbilt-Ingram Comprehensive Cancer Center (now VICC) Clinical Protocol Review Committee: Member, 1995–2001
9. VICC Clinical Trials Office Steering Committee: Member, 1998–present
10. VICC Biostatistics Faculty Search Committee: Chair, 1998
11. Information Policy Advisory Committee Database Subcommittee: Member, 1999
12. Admissions: Faculty Interviewer, 2000–2001
13. Bioinformatics Graduate Programs Admissions Committee: Member, 2001
14. Data Center for Large Clinical Trials Multidisciplinary Group Committee: Member, 2001–present
15. VICC Data Safety and Monitoring Committee: Member, 2001–present
16. VICC Clinical Protocol Scientific Review Committee: Member, 2001–present
17. Data Safety and Monitoring Committee—RAAS, Inflammation and Post-Operative Atrial Fibrillation: Member, 2003–present
18. Department of Biostatistics Promotion and Tenure Committee: Member, 2003–present
19. Department of Biostatistics, Faculty Search Committee: Member, 2003–present
20. Microarray Core Steering Committee: Member, 2006–2009
21. Ayers Institute Steering Committee: Member, 2008–present
22. Data Safety and Monitoring Board—Inotropic Drugs and Risk of Postoperative Atrial Fibrillation: Member, 2009–present
23. Data Safety and Monitoring Board—Antioxidant Enzyme Induction as a New Approach to Therapy in Patients with Asthma: Member, 2009–present
24. Emerging Information and Technical Conference (EITC) Biomedical Technology Steering Committee: Member, 2011–present
25. BioVU Steering Committee: Member, 2012–present
26. Genetics Executive Committee: Member, 2014–present
27. Executive Committee of the Executive Faculty: Member, 2014–2015, 2019–2020, 2023–2025
28. Faculty Appointments and Promotions Committee: Member, 2015–2017
29. Faculty Advisory Committee for Research IT: Member, 2015–present
30. Grant W. Liddle Chair Selection Committee: Chair, 2017
31. Vanderbilt Faculty Research Scholars Selection Committee: Member, 2018
32. Donna S. Hall Chair in Breast Cancer Review Committee: Chair, 2021
33. Research IT Steering Committee, 2023–present
34. Frances and John C. Burch Chair in Obstetrics and Gynecology Review Committee: Chair, 2024

American Association for Cancer Research (AACR)—*see above, under* Service

National Institutes of Health (NIH)—*see also under* Service

35. Sequence Read Archive (SRA), MEP Study Section SEP (ZRG1-MEP-04S): Member, 1999
36. National Institute on Alcohol Abuse and Alcoholism SEP: Member, 2005
37. CSR ZRG1 OTC-X (14) B Experimental Cancer Therapeutics SBIR/STTR Study Section: Member, 2009–2010

University of Alabama at Birmingham Comprehensive Cancer Center

38. External Advisory Board (EAB): Ad Hoc Member, 2003
39. External Consultant for Bioinformatics, 2003

American Joint Committee on Cancer (AJCC)

40. Statistical Task Force Committee: Member, 2005
41. Statistical Task Force, Development of the 7th Edition of the AJCC Cancer Staging Manual: Member, 2006

National Security Agency (NSA)

42. Workshop on Mathematical Tools and Statistical Techniques for Quantitative Medical Data Analysis: Scientific Committee Member, 2005–2006

Middle Tennessee State University

43. College of Basic and Applied Science, Master of Science in Professional Science (MS-PS) Advisory Board: Member, 2006–present

State of Tennessee Department of Health

44. Tennessee Cancer Registry Advisory Committee: Member, 2007–present

US Food and Drug Administration (FDA)

45. Office of Women's Health Intramural Science Program: Expert Reviewer, 2007
46. Anti-infective Drugs Advisory Committee: Voting Member, 2009–2014
47. Antimicrobial Drugs Advisory Committee (formerly the Anti-infective Drugs Advisory Committee): Ad Hoc Member, 2015–present

International Association for the Study of Lung Cancer

48. World Conference International Scientific Committee: Member, 2007–2009, 2011
49. World Conference Committee, Trial Design/Statistics: Member, 2016

Northwestern University

50. Robert H. Lurie Comprehensive Cancer Center EAB: Member, 2008–present
51. Breast SPORE EAB: Member, 2020–present

SRA International Global Health Sector

52. External Consulting and Advisory Team: Member, 2008–present

Tokai University Institute of Innovative Science and Technology, Isehara, Japan

53. Tenure Track Faculty Selection Committee: Member, 2010–2015

Shanghai Center for Bioinformatics Technology, China

54. Academic Committee: Member, 2010–present

University of Colorado, Denver

55. SPORE in Lung Cancer External Scientific Advisory Board (ESAB): Member, 2010–2019
56. Lung Strategic Partnering to Evaluate Cancer Signatures (SPECS) External Advisory Committee (EAC): Member, 2011–2019
57. University of Colorado Comprehensive Cancer Center ESAB: Member, 2020–present

University of Kentucky Markey Cancer Center, Lexington

58. Biostatistics Shared Resource Facility EAB: Member, 2010–present

American College of Radiology

59. Imaging Network Biospecimen Review Committee: Member, 2010–present

Moffitt Cancer Center

60. EAC: Member, 2014–present
61. Council of Scientific Advisors: Ad Hoc Member, 2010
62. SPORE in Lung Cancer ESAB: Member, 2010–2015
63. Integrated Program in Cancer and Data Science EAB: Member, 2021–present
64. Next Generation Immunotherapies for Patients with Lung Cancer EAB, 2022–present
65. Head-Neck SPORE EAB: Member, 2023–present

Duke University

66. Institute for Genome Sciences and Policy: Data Safety and Monitoring Board-Oversight Committee (DSMB-OC): Member, 2011–2012

Arizona University

67. Arizona GI SPORE EAC: Member, 2011–2012

Dartmouth College

68. Institute for Quantitative Biomedical Sciences EAC: Member, 2012–present

Rutgers Cancer Institute of New Jersey

69. Precision Medicine Initiative EAB: Member, 2013–present
70. Biometrics Shared Resource EAB: Member, 2019–present

Radiation Therapy Oncology Group, American College of Radiology

71. Brain SPORE EAB: Member, 2013–present

City of Hope Cancer Center

72. Biostatistics Core EAB: Member, 2013

University of California, San Diego

73. Cancer Center Support Grant: Biostatistics Core External Consultant, 2013

Mount Sinai School of Medicine

74. Tisch Cancer Institute EAB: Member, 2013–present
75. Myeloproliferative Neoplasms–Research Consortium (MPN–RC) EAB: Member, 2019–present

United States-Latin America Cancer Research Network

76. Molecular Profiling of Breast Cancer Study DMC: Member, 2013–present

University of Texas

77. MD Anderson Cancer Center—R. Lee Clark Fellows Award EAB (Scientist Panel): Member, 2014–present
78. Southwestern Medical Center/MD Anderson Cancer Center Lung SPORE EAB: External Reviewer, Data Science (Biostatistics/Bioinformatics/Database) Core, 2017–present

Indiana University

79. Center for Computational Biology and Bioinformatics (CCBB) EAB: Member, 2014–present
80. Genome Privacy Workshop Advisory Committee: Member, 2015–present

Baylor College of Medicine

81. Dan L. Duncan Cancer Center EAB: Member, 2014–present

Peking University, China

82. Biobank Advisory Board: Member, 2014–present

Oregon Health and Science University: Knight Cancer Institute

83. Cancer Biostatistics Advisory Committee: Member, 2015–present
84. EAB Committee: Member, 2019–present

Meharry-Vanderbilt Alliance

85. Epidemiology & Statistics Senior Faculty Search Committee: Co-chair, 2001–2002
86. Statistics Senior Faculty Search Committee: Co-chair, 2013

Yale School of Medicine: Yale Cancer Center

87. DNA Damage Repair SPORE EAB: Member, 2017–present

Alliance for Clinical Trials in Oncology

88. Alliance Statistics and Data Center (SDC): External Reviewer, 2017–present

The James Cancer Hospital and Solove Research Institute and Moffitt Cancer Center

89. Lung SPORE EAB: Member, 2017–present

International Workshop on Cancer Systems Biology

90. Steering Committee: Member, 2011–present

Executive Yuan (Executive Branch), Taiwan

91. Biotech Industry Strategy Advisory Committee: Member, 2021–present

North American Biostatistics Chairs

92. Executive Committee: Co-chair, 2020–2021

Ministry of Health and Welfare (Taiwan) Inter-institutional Collaborative Project in Cancer Translational Research

93. Review Committee: Member, 2021

Mayo Clinic

94. Lung SPORE EAB: Member, 2020–present

University of Iowa

95. Oral Cancer SPORE EAB: Member, 2022–present

Terry Fox Research Institute

96. International Review Committee, Program Project Grants: Member, 2022–present

Conquer Cancer

97. Conquer Cancer-ICRF-CDA Subcommittee: Member: 2022

Academia Sinica

98. Institute of Statistical Science, Academia Advisory Committee: Member, 2023–2025

Woxsen University

99. International Advisory Board: Member, 2023–2025

University of Florida Health Cancer Center

100. External Advisory Board: Member, 2024–present

National Taiwan University
101. Graduate Institute of Oncology EAB: Member, 2024

National Cheng Kung University
102. International Advisory Board: Member, 2024

National Human Biological Database Integration Platform (Taiwan)
103. Advisory and Review Expert Committee: 2024

Georgetown University
104. Disparities SPORE EAB: Member, 2024–present

LEADERSHIP DEVELOPMENT

Vanderbilt University School of Medicine Academic Leadership Program, 2007

CONSULTING

Vanderbilt University Medical Center: provided consulting services to more than 1,000 clients and reviewed over 2,000 clinical protocols, 1994–present

CURRENT RESEARCH AT VANDERBILT

1. 1K24HL165163-01A1 (Shibao) 04/20/2023–03/31/2028
   NHLBI $579,915
   Mentoring in Cholinergic Regulation of Vascular Oxidation
   This project will test the novel hypothesis that noninvasive vagus nerve stimulation will result in the improvement of vascular inflammation and oxidative stress in African Americans.
   Roe: Co-Investigator

2. U01 DK137533 (Rothman) 07/21/2023-06/30/2027
   NIDDK $27,912,000
   CODA: COvid and Diabetes Assessment
   The study will include 1600 study participants diagnosed with diabetes in the last 3 months, who have had a known COVID-19 infection in the past 90 days and those with recent diagnosis of diabetes and no known COVID-19 infection in the past year.

3. U54 TR002243-06 (Bernard) 06/01/2017–02/28/2027
   NCATS $55,506,825
   Vanderbilt Institute for Clinical and Translational Research (CTSA)
   The Vanderbilt Institute for Clinical and Translational Research (VICTR) is a highly functional and integrated clinical and translational (C&T) research infrastructure that has raised the quality and rigor of the research conducted at Vanderbilt and partner Meharry Medical College. VICTR contributes to the mission of the CTSA program, leveraging unique resources and expertise while elevating and advancing the role of health equity in C&T research.
   Role: Co-Investigator

4. NU3 HCK000006 (Banerjee) 09/30/2021–09/29/2026
   CDC $2,462,128
   Enhanced Detection of Resistance, Antibiotic Stewardship and infection control, and Genome sequencing NETwork for AMR containment (DRAGNET)
   We propose creation of a network called DRAGNET to increase laboratory diagnostic testing capacity for resistance detection in in gram-negative BSIs using genotypic (whole genome sequencing, WGS)

and novel phenotypic susceptibility testing methods. We will implement these laboratory tests with infection control and antimicrobial stewardship training and activities to optimize integration of diagnostics and AMR data into clinical management.
Role: Co-Investigator

5. U54 CA163072-13 (Pal) 09/21/2011–08/31/2026
NCI $7,488,477
MMC, VICC, and TSU: Partners in Eliminating Cancer Disparities
To meet our ultimate goals of overcoming cancer disparities while simultaneously strengthening research impact, the overall objectives of this project are to: 1) increase the participation in traditional, investigator-initiated cancer research projects awarded to MMC and TSU faculty with collaborative guidance by senior VICC faculty; 2) increase the number of investigator-initiated awards to VICC junior faculty that address cancer disparities; 3) recruit, train and retain early-stage investigators to become independent leaders in cancer health disparities and cancer research and training; 4) expand MVTCP participation in national oncology treatment and interventional trials; 5) strengthen the physical and intellectual infrastructure for research at MMC and TSU; 6) facilitate partnerships between community organizations and academic researchers, leading to hypothesis driven research projects that include the involvement of a community health educator; 7) increase the number of MMC and TSU trainees engaged in cancer research; and 8) increase awareness of cancer research opportunities and careers for minority high school, undergraduate, graduate and medical students through the Pathway to Discovery program.
Role: Core Lead

6. VUMC95146/R37 CA245157 (Warram) 10/11/2021–04/30/2026
University of Alabama-Birmingham/NCI $339,376
Reduction of Tumor-Positive Margins in Oncology Surgery
Because poor survival directly correlates with positive margin rate in head and neck cancer, we propose a clinical trial using a systemically injected contrast agent to determine if optical imaging during surgery can improve detection of tumor-positive margins in real-time.
Role: Co-Investigator

7. VUMC 119625 (Richmond) 02/01/2024–01/31/2026
Veterans Administration $25,161
PRIVIA (Post-deployment Respiratory Illness in Veterans of Iraq and Afghanistan)
This study aims to better understand the drivers of lung injury in Iraq and Afghanistan veterans, long-term
health outcomes in these veterans, and non-invasive methods of disease detection.
Role: Biostatistics Lead

8. VUMC88214 / U54 CA260560 (Hirsch) 09/30/2020–08/31/2025
Mt. Sinai/NCI $1,200,297
Vulnerability of SARS-CoV-2 Infection in Lung Cancer Based on Serological Antibody Analyses
The purpose of the Data Science Core (DSC) is to provide professional expertise in biostatistics, bioinformatics and research informatics for all SARS-CoV-2 Serological Sciences Centers of Excellence (U54) projects, investigators and participants.
Role: Core Director / Site PI

9. P30 CA068485-27S2 (Park) 06/01/2020–08/31/2025
NCI $600,000

Cancer Center Support Grant-COVID-19 and Cancer Consortium (CCC19)
The driving goal of the consortium is to collect granular, uniformly organized information to stimulate translational science, and to arm treating providers with the most complete data resource as rapidly as possible on cancer patients infected with COVID-19.
Role: Co-Investigator

10. P30 CA068485-27 (Park) 09/01/1998–08/31/2025
NCI $37,668,378
Cancer Center Support Grant
The Vanderbilt-Ingram Cancer Center Support Grant provides the infrastructure support to facilitate basic, clinical and population-based research relevant to our mission to alleviate cancer death and suffering through pioneering research, innovative patient care, evidence-based prevention, education and communication.
Role: Scientific Director

11. P50 CA236733-03 (Coffey) 07/09/2019–05/31/2025
NCI $11,590,546
Vanderbilt-Ingram Cancer Center SPORE in Gastrointestinal Cancer
The major goals of this project are to: (1) examine whether cancer stem cells represent a tractable therapeutic target, (2) optimize EGFR blockade by targeting glutamine metabolism, and (3) develop a drug to inhibit MYC, through project specific aims supported by three research cores.
Role: Core Director

12. VUMC44233/UM1CA186689 (LoRusso) 07/10/2014–02/28/2025
Yale/NCI $1,915,930
VIKtriY Early Clinical Trials Consortium (ECTC)
The major goals of this project are to 1) leverage novel scientific discoveries for translation into early phase trials, using the CTEP pharmacopeia, in rare cancers, common cancers, and uncommon variants of common cancers; 2) incorporate serum, tissue and imaging biomarkers to better understand the effects of novel agents either alone or in combination; 3) train early career investigators to be knowledgeable and proficient in conducting early phase clinical trials by providing clinical research leadership opportunities and mentoring; and 4) include as a component of our early phase clinical trial recruitment no less than 10% underserved/special populations.
Role: Biostatistician

13. VUMC82497/P01 CA229123 (Weaver) 01/01/2020–12/31/2024
VU/NCI $3,228,222
exRNA in Colorectal Carcinoma: Biogenesis and Function
The overall goal of our program is to understand how extracellular RNA is secreted and taken up by recipient cells to influence the development and aggressiveness of colorectal carcinomas (CRC).
Role: Director, Core 1A

14. R35 HL140016-05 (Harrison) 02/01/2018–12/31/2024
NHLBI $5,277,926
Mechanisms of Immune Activation in Hypertension
The major goal of this project is to identify how hypertension interacts with the immune system to elicit the inflammatory response.
Role: Co-Investigator

15. U2 CCA233291-01 (Coffey) 09/20/2018–08/31/2024
NCI $12,245,541
Integrative Single-Cell Atlas of Host and Microenvironment in Colorectal Neoplastic Transformation
The major goal of this project is to map spatial relationships across the spectrum of normal colon, early polyps, advanced adenomas, and adenocarcinomas, including their unique stromal and microbial microenvironments, to identify these phenotypes for development of precision diagnostics and preventive strategies.
Role: Unit Co-Lead

COMPLETED RESEARCH AT VANDERBILT

P50 CA098131-20 (Pietenpol) 08/07/2003–07/31/2024
NCI Role: Core Director
SPORE in Breast Cancer
The overall goal of this project was to conduct multidisciplinary, mechanism-based, translational research of the highest possible impact that will contribute meaningfully to measurable progress in breast cancer.
Role: Core Director

P01 HL108800-11 (Hemnes) 09/01/2012–06/30/2023
NHLBI Role: Co-Investigator
Hormonal, Metabolic and Signaling Interactions in PAH
The overall goal of our program was to establish new therapeutic interventions to target the basic molecular etiology of PAH.

Conquer Cancer Award (Chen) 07/01/2022–06/30/2023
ASCO Role: Co-Investigator
Real-World Uptake and Efficacy of Immuno-Oncology Combinations in Metastatic Renal Cell Carcinoma and Validation of a Novel Biomarker: Leveraging Evidence from the ASCO's CancerlinQ Discovery Database
The overall goal was to improve the care and outcomes of patients with metastatic kidney cancer in the United States by leveraging evidence from real-world data.

VUMC66058 / U54 CA217450 (Quaranta) 04/01/2018–03/31/2023
VU/NCI Role: Site PI
Phenotype Heterogeneity and Dynamics in SCLC
This project focused on identifying mechanisms that drive cellular heterogeneity of small cell lung cancer as well as how to target this heterogeneity to improve therapy.

U24 CA163056-11 (Shyr) 03/15/2017–02/28/2023
NCI Role: PI
Barrett’s Esophagus Translational Research Network Coordinating Center (BETRNetCC)
The major goal of this project was to provide administrative and leadership support for the Barrett’s Esophagus Translational Research Network (BETRNet) by facilitating data collection, management, analysis, and dissemination across the BETRNet.

P01 HL129941-05 (Harrison) 08/01/2016–07/31/2022
NHLBI Role: Co-Investigator
The Role of Inflammation in Cardiovascular Disease

The overall goal of this project was to understand how immune cells including macrophages, dendritic cells (DCs) and T cells are activated and contribute to cardiovascular diseases including atherosclerosis and hypertension.

18FRN34110369 (Roden) 07/01/2018–06/30/2022
American Heart Association Role: Biostatistician
Atrial Fibrillation Network, SFRN
The major goal of this project was to advance understanding, prevention, diagnosis, and treatment of atrial fibrillation through the mechanism of an AHA strategically focused research network (SFRN).

R01 CA204819-01A1 (Pal) 07/01/2017–06/30/2022
NCI Role: Co-Investigator
Breast Cancer in Blacks: Impact of Genomics, Healthcare Use and Lifestyle on Outcomes (BRIGHT)
This study evaluated the impact of genetic factors (germline admixture assessment of common genetic variants), care patterns (treatment delay, underuse), lifestyle factors and co-morbidities (obesity, sedentary lifestyle, diabetes), and somatic gene expression profile (GEP) on BC-specific survival.

R01 HL133127 (Murray) 04/01/2017–03/31/2022
NHLBI Role: Collaborator
Novel Pathophysiological Targets in Atrial Fibrillation Susceptibility
This study tested the hypotheses of mechanistic links between common diseases such as hypertension and obesity with atrial fibrillation.

R01 HL124935 (Knollmann) 06/01/2016–03/31/2022
NHLBI Role: Co-Investigator
Toward a Mechanism-Based Approach to Treating Atrial Fibrillation
The major goal of this study was to investigate the molecular mechanisms responsible for atrial fibrillation, the most common form of chronic arrhythmia in the United States.

VUMC61566/U24 CA213274 (Shyr) 02/20/2017–01/31/2022
Memorial Sloan-Kettering/NCI Role: Site PI
Coordinating Center for the NCI Small Cell Lung Cancer Research Consortium

R01 NS0940941 (DeBaun) 08/01/2016–07/31/2021
NINDS Role: Co-Investigator
Primary Prevention of Stroke in Children with SCA in Sub-Saharan African II
The major goal of this project was to determine if moderate dose hydroxyurea when compared to low dose hydroxyurea could successfully prevent strokes in high-risk children with SCA living in Nigeria and Ghana.

VUMC63588 / BRE 17107 (Mayer) 05/01/2018–04/30/2021
AACR Role: Co-Investigator/Biostatistical Consultant
Immunotherapy Combination Strategies in ER+ Metastatic Breast Cancer
The aim of the study was to define a regimen(s) to improve the TME by increasing CD8+ T-cells making anti-PD-L1 therapy more effective.

VUMC07131 (Schaffner) 01/01/2020–12/31/2020
CDC Role: Investigator
Surveillance Services (emerging infectious diseases program)

The goal of this project was to address key public health issues and inform public health policy and treatment guidelines, focusing on activities that lead directly to the prevention of diseases.

R01 CA200999 (Yang) 12/01/2015–11/30/2020
NCI Role: Co-Investigator
Sex Hormones, Phytoestrogens and Lung Cancer in Female Nonsmokers
The major goal of this project was to fill important gaps in our knowledge about whether exposure to endogenous estrogens and plant estrogens (phytoestrogens) in nonsmoking women may relate to lung cancer risk and mortality.

P30 CA068485-22S3 (Pietenpol) 04/30/2016–08/31/2020
NCI Role: Co-Investigator
Investigation of the Effectiveness of Combination and Single-Agent Targeted Therapies in Novel and Established Melanoma Patient Derived (PDX) [Quantitative sciences supplement]

P30 CA068485 (Pietenpol) 09/10/2010–08/31/2020
NCI Role: Core Leader
Cancer Center Support Grant
This grant provided the infrastructure support to facilitate basic, clinical and population-based research relevant to our mission to alleviate cancer death and suffering.

U01 CA196405 (Massion) 09/24/2015–08/31/2020
NIH/NCI Role: Co-Investigator
Cellular, Molecular and Quantitative Imaging Analysis of Screening-Detected Lung Adenocarcinoma
The goal of this project is to improve prediction models of early stage adenocarcimona (ADC) of the lung by integrating quantitative imaging, molecular and cellular determinants to offer a paradigm-shift in the clinical management of patients with early ADC.

UM1 CA173640 (Shu) 09/18/2013–08/31/2020
NCI Role: Co-Investigator
Shanghai Men’s Health Study
The major goal of this project was to conduct a long-term epidemiological study of cancer and other chronic diseases, with a focus on identifying modifiable protective dietary factors for cancers.

P01 HL116263 (Linton) 05/20/2016–04/30/2020
NHLBI Role: Co-Investigator
HDL Function in Human Disease
The major goal of this project was to define the mechanisms for HDL dysfunction in three distinct diseases associated with increased risk for atherosclerotic cardiovascular disease.

UM1 CA186689 (Vanderbilt PI: Berlin) 10/01/2014–02/29/2020
NCI/Primary: Yale University Role: Co-Investigator
ViKTriY Early Clinical Trials Consortium
The ultimate purpose of this project was to define better approaches for the development of novel anticancer agents that capitalize on the ability to characterize tumors molecularly and find appropriate biomarkers to select patients most likely to respond to specific agents.

P50 CA098131 (Mayer/Pietenpol/Arteaga) 04/30/2008–08/31/2019
NCI Roles: Co-Investigator and Core Leader

Discovery of Targetable Mechanisms of Endocrine and SPORE in Breast Cancer
This study conducted multidisciplinary, mechanism-based translational research of the highest possible impact to contribute meaningfully to measurable progress in breast cancer.

P50 CA095103 (Coffey) 05/01/2016–06/30/2019
NIH/NCI Role: Core Leader
SPORE in GI Cancer - Bridge Funding
The four projects of this study continued to focus on transforming how we diagnose and treat individuals with colorectal cancer and deepening our understanding of the pathobiology of colorectal neoplasia.

AHA 14 SFRN 20420046 (Harrison) 07/01/2014–06/30/2018
American Heart Association Role: Co-Investigator
Vanderbilt University Strategically Focused Prevention Research Center
The major goal of this project was to establish a prevention research center to expand and extend efforts to reduce coronary heart disease (CHD), stroke and risk.

R01 CA034590 (Richmond) 07/01/2013–06/30/2018
NCI Role: Co-Investigator
Chemokine Signals in the Pre-Metastatic Niche Inhibit Metastasis
The major goal of this project was to evaluate mechanisms of entrainment and to characterize the precise intracellular signal transduction pathways involved in chemokine mediated entrainment of leukocytes associated with progression of breast cancers.

U01 CA202979 (Blot) 07/21/2016–03/31/2017
NCI Role: Co-Investigator
Southern Community Cohort Study
This long-term prospective epidemiologic study tracked cancer incidence among approximately 86,000 adults ages 40–79, two-thirds African American. Nested case-control studies utilized baseline questionnaire data and stored biologic specimens to address unanswered questions about the causes of cancer among African Americans and the determinants of health disparities.

R01 CA177372 (El-Rifai) 08/01/2013–07/31/2016
NCI Role: Co-Investigator
The Role of miRNA Network in Gastric Cancer
The goal of this project was to gain further understanding of the role of *H. pylori* in shaping the miRNA signature and promoting the multi-step gastric tumorigenesis in order to identify diagnostic, prognostic and possibly therapeutic miRNA targets in gastric cancer.

R01 CA085492 (Moses) 03/01/2011–02/29/2016
NCI Role: Co-Investigator
TGF-Beta Suppression and Promotion of Mammary Carcinomas
The major goal of this project is to delineate the mechanisms of both suppression and promotion of mammary tumors by TGF-beta, using mouse models.

R21 NS080639 (DeBaun) 09/30/2012–08/31/2014
NINDS Role: Co-Investigator
Primary Prevention of Strokes in Nigerian Children with Sickle Cell Disease

The goal of this project was to determine the acceptability of randomization to HU vs. placebo for primary prevention of strokes in Nigerian children with sickle cell anemia (SCA) in preparation for a NIH-sponsored multicenter phase III trial.

National Lung Cancer Partnership (Shyr) 08/01/2012–07/31/2014
National Lung Cancer Partnership Role: Principal Investigator
Lung Cancer Mutation Consortium Protocol
The major goal of this project was to develop and implement a customized clinical relational database for use by the Lung Cancer Mutation Consortium.

P01 CA116087 (Peek) 01/01/2009–12/31/2013
NCI Role: Co-Investigator
pylori-induced Inflammation and Gastric Cancer
The major goal of this project was to delineate the molecular signaling events initiated by *H. pylori*-epithelial cell contact that regulate phenotypes related to gastric carcinogenesis.

R01 CA102162 (Moses) 12/01/2011–11/30/2013
NCI Role: Co-Investigator
TGF-beta in Mammary Development and Tumorigenesis
The major goal of this study was to characterize Cre expression pattern, recombination, and phenotype in various TGF-beta recombinant mouse backgrounds.

RC2 CA14839 (Pao: Colorado) 09/01/2009–08/31/2013
NIH Role: Core Leader
Lung Cancer Mutation Consortium Trial
The major goal of this project was to establish a Lung Cancer Mutation Consortium (LCMC) consisting of 13 institutions with a major interest in lung cancer and genomic testing of lung cancer as documented by having major NCI grants in lung cancer.

P50 CA128323 (Gore) 09/22/2008–08/31/2013
NCI Role: Core Leader
Vanderbilt *in vivo* Cellular and Molecular Imaging Center
The major goal of this project was to establish a new *in vivo* cellular and molecular imaging center at Vanderbilt University, dedicated to highly innovative molecular imaging studies of cancer biology.

U54 CA091405 (Moses) 09/25/2006–07/31/2012
NIH/NCI Role: Co-Investigator
MMC and VICC: Partners in Eliminating Cancer Disparities
A comprehensive cancer research partnership between MMC and VICC

R01 CA129961 (Moses) 04/01/2008–03/31/2012
NCI Role: Co-Investigator
Evaluation of MRI Biomarkers of Breast Cancer Response
The proposed research combined several new imaging methods to obtain quantitative information on how breast tumors respond to treatment.

P50 CA090949 (Carbone) 09/26/2007–03/31/2012
NIH/NCI Role: Core Leader
SPORE in Lung Cancer

The major goal of this project was to investigate the molecular features of tumors or tumor-host interactions that determine their clinical behavior and represent potential molecular targets for interventions.

U54 CA126505 (Matrisian) 09/25/2006–08/31/2011
NIH/NCI Role: Co-Investigator
Paracrine TGF-Beta Signaling in Tumor Initiation and Progression
The major goal of this project was to establish the Vanderbilt University Tumor Microenvironment Network (VUTMEN) to contribute to the generation of a comprehensive understanding of the role of the tumor stroma.

P50 CA098131 (Moses) 09/25/2006–07/31/2011
NCI Role: Co-Investigator
HER (erbB) Inhibitors in Untreated Operable Breast Cancer (SPORE in Breast Cancer Supplement)
This supplement provided clinical trial, administrative, and correlative studies support for inter-SPORE clinical trials with the University of Alabama (Birmingham), University of North Carolina (Chapel Hill), and Dana-Farber Cancer Institute.

R01 DK058587 (Peek) 09/01/2007–06/30/2011
NIDDKD Role: Core Leader
pylori and Gastrointestinal Biology
The major goal of this project was to investigate effects of *H. pylori* on prostaglandin biology using conditionally immortalized gastric cells.

P50 GM015431 (Morrow) 07/03/2006–06/30/2011
NIGMS Role: Co-Investigator
Research Center for Pharmacology and Drug Toxicology
The focus of the Center is research related to eicosanoid biology and pharmacology.

R01 CA080195 (Arteaga) 04/01/2005–03/31/2011
NCI Role: Co-Investigator
Erbb2-targeted Anti-Tumor Strategies in Breast Cancer
The major goal of this project was to identify mechanisms of resistance to anti-HER2 drugs, contributing to the eventual elimination of HER2+ breast cancer.

R01 DK73902 (Peek) 04/01/2006–12/31/2010
NIDDKD Role: Co-Investigator
Mechanisms that Regulate *Helicobacter Pylori*-Induced Beta-Catenin Activation
The overarching objective of this program project was delineation of the molecular signaling events initiated by *H. pylori*:epithelial cell contact that regulate phenotypes related to gastric carcinogenesis.

R01 CA085492 (Moses) 12/15/2005–11/30/2010
NCI Role: Co-Investigator
TGF-beta Suppression and Promotion of Mammary Carcinomas
This study was to determine the effects of systemic inhibition of TGF-beta-signaling on mammary tumor formation and metastases from MMTV-c-neu and MMTV-PyVmT-induced mammary tumors in the context Tgfbr2 knockout in mammary epithelial cells effected by both MMTV-Cre and WAP-Cre.

U01 CA114771 (Carbone) 09/30/2005–05/31/2010
NCI Role: Co-Investigator

Molecular Signatures of Lung Cancer
This team evaluated the potential clinical usefulness of several molecular signatures already developed with a variety of molecular analysis technologies, including DNA, RNA and protein-based technologies addressing both diagnostic and predictive signatures.

P01 CA077839 (DuBois) 05/01/2004–04/30/2009
NCI Role: Co-Investigator
Mechanisms for Chemoprevention of Cancer
The overall goal of this PPG was to determine the molecular mechanisms involved in the chemoprevention of cancer by non-steroidal anti-inflammatory drugs (NSAIDS). The studies specifically tested hypotheses that the cyclooxygenase (COX) pathway and/or its eicosanoid products play a role in certain aspects of breast, cervical, ovarian, and colorectal carcinogenesis.

R21 CA099269 (Berlin) 09/18/2003–08/31/2005
NCI Role: Co-Investigator
PS-341 in Hepatocellular Carcinoma: A Phase II Trial
Specific aims for this study were to evaluate (1) the antitumor effect of PS-341 in hepatocellular carcinoma patients, (2) the effect of PS-341 on 26S proteasome activity in peripheral white blood cells (WBC's) and patient serum, and (3) the effect of PS-341 on intratumoral NF-kB activation, on tumor apoptosis and 26S proteasome activity.

STATISTICAL SOFTWARE
R, S-PLUS, SAS, MATLAB, Stata, SPSS, BDMP, SUDAAN, SOLAS, StaXact, Resampling Stats, East, nQuery Advisor, PASS, NCSS, StudySize, SYSTAT, GLIM, Minitab, EGRET, Epicure, PC Cluster, etc.

OPERATING SYSTEMS & LANGUAGES
LINUX, WINDOWS, DOS, UNIX, VAX/VMS, MAC, BASIC, FORTRAN, COBOL, C, C++, C-sharp, HTML, JAVA, etc.

INTERESTS
- Consulting on biomedical problems, designing experiments and data analysis, clinical trials design and analysis.
- Applied multivariate analysis, especially repeated measures procedures and high-dimensional data analysis.
- Applied bioinformatic and statistical methods in modern molecular biology: genomics and proteomics research.

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