CURRICULUM VITAE

Yu Shyr, Ph.D.

PRESENT POSITION **July 2019**

Chairman
Department of Biostatistics
Vanderbilt University Medical Center

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

Director
Center for Quantitative Sciences
Vanderbilt University Medical Center

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

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

Professor
Department of Biostatistics
Vanderbilt University Medical Center

Department of Biomedical Informatics
Vanderbilt University Medical Center

Department of Health Policy
Vanderbilt University Medical Center

Associate Editor for Statistics
JAMA Oncology

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EDUCATION

1981 – 1985	*B.B.,* Statistics Tamkang University (Taiwan)
1987 – 1989	*M.S.,* Statistics Michigan State University
1989 – 1994	*Ph.D.,* 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 School of Dentistry University of Michigan
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, Incorporated
1997 – 2000	***Consultant*** Applied Medical Research, Incorporated
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
2001 – 2013	***Faculty*** Center for Technology-Guided Therapy Vanderbilt University School of Engineering Vanderbilt University Medical Center
2001 – 2012	***Director, Biostatistics Core*** Lung Cancer SPORE Vanderbilt University School of Medicine
2001 – present	***Co-Director, Biostatistics and Bioinformatics Core*** Meharry/Vanderbilt Cancer Center Alliance Grant Vanderbilt University Medical Center Meharry Medical College
2002 – present	***Director, Biostatistics and Bioinformatics Core*** GI Cancer SPORE

	Vanderbilt University Medical Center
2003 – present	***Director, Biostatistics 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, Incorporated
2005 – 2012	***Adjunct Professor*** School of Medicine Tokai University, Japan
2006 – 2017	***Chief*** Division of Cancer Biostatistics Department of Biostatistics Vanderbilt University Medical Center
2006 – 2018	***Invited Professorship*** Shanghai Center for Bioinformatics Technology, China
2006 – 2014	***Affiliate Professor*** Department of Statistics National Chen Kung University, Taiwan
2007 – 2011	***Director*** Cancer Biostatistics Center Vanderbilt-Ingram Cancer Center Vanderbilt University Medical Center
2007 – 2009	***Consultant*** Westat, Incorporated Rockville, MD
2009 – present	***Associate Director for Quantitative Sciences Integration*** Vanderbilt-Ingram Cancer Center Vanderbilt University Medical Center
2009 – 2012	***Director*** Statistical Center Sentinel Node Oncology Foundation (SNOF)
2009 – 2014	***Voting Member*** United States Food and Drug Administration (FDA) Anti-infective Drugs Advisory Committee: Voting member
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	***Professor*** Department of Biomedical Informatics Vanderbilt University Medical Center
2012 – present	***Director*** Vanderbilt Technologies for Advanced Genomics Analysis and Research Design 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 – present	***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
2015 – present	***Steering Committee Member*** Advanced Computing Center for Research Education (ACCRE) Vanderbilt University
2016 – present	***Consultant*** Center for Drug Evaluation and Research (CDER) United States Food & Drug Administration (FDA)
2017 – present	***Chairman*** Department of Biostatistics Vanderbilt University Medical Center
2018 – present	***Training Faculty Member*** Cancer Biology Department Vanderbilt University School of Medicine

HONORS

1. American Statistical Association Chapter Service Recognition Award, 2000.
2. Invited Keynote Speaker of Taiwan Biotechnology Symposiums, 2000.
3. Chair Professor of Statistics at Tamkang University, 2000.

4. Vanderbilt University School of Medicine Master of Science in Clinical Investigation Program Excellence in Teaching Award, 2002, 2003, 2004.
5. Endowed Professorship: Ingram Professor of Cancer Research, 2003.
6. Invited Keynote Speaker of 2003 Meeting of the Louisiana Chapter of the American Statistical Association.
7. Invited Keynote Speaker of 2008 Biostatistics and Bioinformatics Workshop in High-Dimensional Data Analysis, Taipei, Taiwan.
8. Distinguished Alumni Award of Department of Statistics, Tamkang University, 2008.
9. American Statistical Association, Fellow, 2010.
10. Invited Keynote Speaker, Japan Symposium on Innovation in Medical Research and Ethical Challenges, Tokyo, Japan, 2010.
11. Highest Rated Lecture, AACR/ASCO Workshop Methods in Clinical Cancer Research, Vail, CO, 2010, 2012, 2013, 2014, 2016.
12. Invited Keynote Speaker, International Conference on Applied Statistics, Taipei, Taiwan, 2011.
13. Scientific Review Committee Award for Exceptional Service and Dedication, Vanderbilt-Ingram Cancer Center, 2011.
14. Jacek Hawiger Award for Teaching Graduate Students and Postdoctoral Fellows in the Classroom, Lecture, or SmallGroup Setting, Vanderbilt University, 2012.
15. Academy for Excellence in Teaching: Member, Vanderbilt University, 2013.
16. Harold L. Moses Chair in Cancer Research, 2013.
17. Gold Eagle Distinguished Alumni Award, Tamkang University, 2015.
18. Merrill J. Egoring Outstanding Mentor Award, AACR/ASCO Workshop Methods in Clinical Cancer Research, Vail, CO, 2016.
19. American Association for the Advancement of Science (AAAS), Elected Fellow, 2016.
20. Outstanding Reviewer of *Cancer* (top 2% of reviewers), 2015-2018.
21. Outstanding Biostatistician Mentor Award, ECCO-AACR-EORTC-ESMO Workshop on Methods in Clinical Cancer Research, 2018.
22. Mr. Chang Wen Bao Honor Lecture Award, 2018
23. Invited Keynote Speaker, The 111th Formosan Medical Association - Taiwan Medical Week, Taipei, Taiwan, 2018.
24. Honorary Doctoral Degree, National Cheng Kung University, Tainan, Taiwan, 2018.
25. Invited Keynote Speaker, Supercomputing Asia 2019 Conference, Singapore, 2019.

PROFESSIONAL SOCIETIES

1. American Statistical Association
2. American Association for the Advancement of Science
3. American Association for Cancer Research
4. American Society for Clinical Oncology
5. International Biometrics Society
6. Institute of Mathematical Statistics
7. Society for Clinical Trials
8. Society for Epidemiologic Research

9. International Chinese Statistical Association

10. International Association for the Study of Lung Cancer

TEACHING, WORKSHOPS, AND SEMINARS

1 At Vanderbilt

Cancer Center Seminars

- "Statistical Power and Sample Size Calculations," 1995
- "The Analysis of Lifetime Data," 1995
- "Analysis of Epidemiologic and Clinical Data," 1995
- "Fundamentals of Clinical Trials," 1995

Department of Preventive Medicine

Lectures

- "Statistics and Epidemiology," 1995 – 1999
- "Clinical Trials," 1998 – 2008
- "Statistics in Medical Literature," 1999 – 2000

Seminars

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

Cancer Biostatistics Workshop, 1996 – 2001

Master of Public Health Program

Courses

- "Clinical Trials" (MPH-5145504) 1996, 1998, 2000 – 2010
- "Biostatistics I" (MPH-5445502) 2012 – present

Department of Biomedical Informatics

Lectures

- "Cluster Analysis," 2002
- "Statistical Methods for Genomic/Proteomic Pattern studies," 2002

Seminars

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

Master of Science in Clinical Investigation Program

Courses

- "Clinical Trials" (MSCI-5145504) 2003 – 2008, 2010 – present

- "Big Data in Biomedical Research" (MSCI-5033) 2015 – present

Lectures

- "Bioinformatics & Biostatistics in Clinical Proteomics Research," 2008

Department of Biostatistics

Seminars

- "Weighted Flexible Compound Covariate Method for Microarray and MALDI-TOF-MS Data Analysis," 2004
- "On Mass Spectrometry Data Preprocessing Using Mathematical Tools and Statistical Techniques," 2004
- "Biostatistics for Regulators and Politicians: Why Statisticians Need to Be Activists?" 2010
- "How to Consult Efficiently with Investigators – A Case Study of Clinical Trials," 2007
- "Challenges and Opportunities for Biostatisticians: Why Biostatisticians Need to Be Activists!" 2011
- "Emerging Methods in Biostatistics and Data Science: Prospects for the Future of Precision Medicine," 2016
- "Analytical Challenges and Tasks for Big Data in Biomedial Research," Lightning Round Talks, 2016
- "Stretching the Limits of Statistics: Integrative Data Science for the Precision Medicine Era," 2017

Interdisciplinary Graduate Program

Courses

- "Statistical Analysis for High Dimensional Data," 2005
- "Clinical Trials," 2012 – 2013

CRC Research Skills Workshop

Seminars

- "Clinical Trial Design," 2006, 2009 – 2010
- "Interim Analysis in Clinical Trials," 2006
- "Randomization in Clinical Trials," 2006

Eskind Biomedical Library Training Program

Courses

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

Other

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

- “An Introduction to Cluster Analysis,” in Statistical Genomics: Making Sense of all the Data Workshop, 2001
- “Statistical Class-prediction Model,” in Vanderbilt-Ingram Cancer Center Seminar, 2001
- “Statistical Methods for Health Sciences,” in Nephrology Clinical Conference, 2001
- “Fundamentals of Clinical Trials,” in Nephrology Clinical Conference, 2001
- “Statistical Issues in Data Safety and Monitoring Committee,” in General Clinical Research Center (GCRC), 2001
- “Applying Cluster Analysis in Proteomics Research,” in Vanderbilt Proteomics Conference Workshop, 2002.
- "Design, Analysis and Interpretation of Microarray Data," in Vanderbilt Clinical Pharmacology Grand Rounds, 2002.
- “Statistical Methods for the Analysis of Microarray Data,” in Nephrology Clinical Conference, 2003.
- "Data Reduction Approaches for High Dimensional Data Derived from High Throughput Assays" in Meharry Medical College/Vanderbilt-Ingram Cancer Center 5th Annual Retreat & Mini Symposium, 2004.
- "Data and Safety Monitoring: A Consumer's Guide," in Clinical Pharmacology Grand Rounds, 2005.
- "A Software Package for MALDI-TOF / Microarray Data Analysis," in Cancer Proteomics & Genomics Program Seminar, Vanderbilt-Ingram Cancer Center, 2005.
- “On Actuarial Models and Survival Analysis for Cancer Patients,” in Math Club Seminar, 2005.
- “Recent Development of Mass Spectrometry Data Processing Using Mathematical Tools and Statistical Techniques,” in VICC and UABCC Spring 2005 Inter-SPORE Biostatistics/Bioinformatics Workshop, 2005.
- “A Software Package for MALDI-TOF MS Data Preprocessing and Statistical Analysis,” in Mass Spectrometry Research Center Seminar, 2005.
- “On Mass Spectrometry Data Preprocessing in Cancer Study,” in Biomath Study Group Seminar, 2005.
- “Some Statistical Aspects of Oncology Phase II Trials,” in Vanderbilt Department of Medicine Seminar, 2006.
- “Novel Statistical Methods for Omics Research,” in Lung Cancer Program Retreat, 2007.
- “Biomathematics & Bioinformatics in Tumor Micro-Environment Research,” in Vanderbilt University Tumor Micro-Environment Network (VUTMEN) Seminar, 2007.
- “Statistical Issues in Clinical Trials,” in Division of Hematology/Oncology Seminar, 2007.
- “Randomized Clinical Trials,” in Internal Medicine resident course: Taught, 2012.
- “Bioinformatics,” CQS Summer Institute: Course Director, 2014.
- “Big Data in Biomedical Research,” CQS Summer Institute: Course Director, 2015, 2016.
- “Randomized Clinical Trials,” Vanderbilt Department of Medicine Clinical Investigator Toolbox, 2016.
- "Emerging Methods in Data Science: Prospects of Precision Medicine," in Pulmonary Grand Rounds, 2017.
- “FDA Review of Human Clinical Trials,” in Introduction to Clinical and Translational Research VICTR course, 2017.
- “Stretching the Limits of Statistics: Integrative Data Science for the Precision Medicine Era,” in Biostatistics Seminar Series, 2017.
- Statistics tutorial in the SyBBURE-Searle program, 2017.
- Chair for Lightning Round, Vanderbilt Data Science Visions Working Group, Data Science Symposium 2018.
- “Big Data, Smart Data, Actionable Data in Precision Medicine,” Vanderbilt University Section of Surgical Sciences, March 2018
- “Big Data, Smart Data, Actionable Data in Precision Medicine,” Vanderbilt Diabetes Research & Training Center, March 2018

2 At Other Universities and Institutions

- "Computer Packages" (BIOS 511, University of Michigan). Taught, Ann Arbor, MI, 1993, 1994.
- "Longitudinal Categorical Data Analysis Using Generalized Linear Models," Seminar given at the University of Pennsylvania, Philadelphia, PA, 1994.
- "Some Aspects of Canonical Correlation Analysis," Seminar given at Syntex Labs, 1994.
- "Incomplete Longitudinal Data Analysis Using Generalized Linear Models," Seminar given at Middle Tennessee State University (The Middle Tennessee Chapter of American Statistical Association), Murfreesboro, TN, 1995.
- "Redundancy Analysis and Its Application to Canonical Analysis of More than Two Vector Variables," Seminar given at the Tamkang University, Taipei, Taiwan, 1995.
- "The Role of the Statistician in the Medical Research," Seminar given at the Tzu Chi Medical College, and National Tung Hua University, Hualien, Taiwan, 1995.
- "A Formula for a Missing Plot in a General Incomplete Block Design, When Recovery of Inter-block Information is Used," Seminar given at the National Cheng Kung University, Tainan, Taiwan, 1995.
- "Statistical Strategies for Modeling the Quasi-Sinusoidality for Time-Qualified Data," Presented at the Technical University, Graz, Austria, 1999.
- "Weighted Three-Stage Cosigner Analysis of Quasi-Sinusoidality of Time-Qualified Data," Seminar given at the Tamkang University, Taipei, Taiwan, 1999.
- "Study Design and Statistical Issues in Clinical Trials," Clinical Trials Protocol Training Course for Bristol-Myers Squibb Inc., Princeton, Wallingford, and Brussels, 2000.
- "Statistics with Applications to the Clinical Trials," lecture given at the Tamkang University, Taipei, Taiwan, 2000.
- "Statistics in Modern Molecular Biology: Protein and RNA Analysis," lecture given at the Tamkang University, Taipei, Taiwan, 2000.
- "Statistical Methods in Longitudinal Data Analysis," lecture given at the Tamkang University, Taipei, Taiwan, 2000.
- "Clustering Methods for the Analysis of Microarray and Protein Expression Data," workshop given at the University of Alabama Comprehensive Cancer Center, Birmingham, AL, 2001.
- "Analysis of cDNA Microarray Expression Data in Human Lung Cancer Using Statistical Class-Prediction Model," lecture given at the University of Alabama Comprehensive Cancer Center, Birmingham, AL, 2001.
- "Statistical Methods for Analyzing the Microarray and Protein Expression Profile Data in Lung Cancer" lecture given at the University of Colorado (Lung SPORE meeting), Denver, CO, 2002.
- "Analysis and Interpretation of Array Data," lecture given at Educational Session in 93rd American Association for Cancer Research Annual Meeting, San Francisco, CA, 2002.
- "Analysis of RNA Expression Patterns in Human Lung Cancer Using Flexible Compound Covariate Method," lecture given at Department of Biostatistics, School of Public Health, University of Alabama, Birmingham, AL, 2002.
- "Analysis and Interpretation of Microarray Data," lecture given at British Columbia Cancer Research Center, Vancouver, Canada, 2002.
- "Weighted Flexible Compound Covariate Method for Classifying Microarray Data," lecture given at National Health Research Institutes, Taipei, Taiwan, 2002.
- "Design, Analysis and Interpretation of Microarray/MALDI-TOF Data," lecture given at Taipei Veterans General Hospital, Taipei, Taiwan, 2002.
- "Quality Filtering: Critical Appraisal and Synthesis of Biomedical Literature" continuing education lecture given at Medical Library Association annual meeting, San Diego, CA, 2003.

- "Statistical Methods for Genomic/Proteomic Pattern Studies," lecture given at the 10th World Conference on Lung Cancer, Vancouver, Canada, 2003.
- "Tumor Proteomic/Genomic Patterns Predict Classification and Tumor Behavior in Human Non-small Cell Lung Cancer", seminar given at Pennington Biomedical Research Center, Baton Rouge, LA, 2003.
- "Statistical Issues in the Era of Proteomics and Genomics Research," lecture given at GI/Pancreas Inter-SPORE Meeting, Nashville, TN, 2004
- "Statistical Issues in the Combinations of the Targeted Therapies in Lung Cancer" lecture given at Targeted Therapies for the Treatment of Lung Cancer Investigators' Meeting, San Diego, CA, 2004.
- "Bioinformatics Tools for High Dimensional Data Analysis," seminar given at the Division of Biostatistics of the National Health Research Institutes, Taiwan, 2004.
- "Analysis of Complex, Multivariate laboratory Data in Epidemiologic Research," lecture given at the International Epidemiology Institute Course on Molecular Epidemiology, Nashville, TN, 2004.
- "Biostatistical Analyses of Proteomic and Microarray Data," lecture given at the International Epidemiology Institute Course on Molecular Epidemiology, Nashville, TN, 2004.
- "Misclassification, Multiple Comparisons, and Sample Size Requirements," lecture given at the International Epidemiology Institute Course on Molecular Epidemiology, Nashville, TN, 2004.
- "The Challenges of the Statistical Design, Analysis, and Interpretation for High Dimensional Data," lecture given at the Joint NCI-FDA Workshop on Research Strategies, Study Design and Statistical Approaches to Biomarkers Validation for Cancer Diagnosis and Detection, Washington DC, 2004.
- "Clinical Trials," AACR/ASCO Workshop Methods in Clinical Cancer Research, Vail, CO, 2004, 2005, 2006, 2007.
- "Data Reduction Approaches for High Dimensional Data Derived from High Throughput Assays," lecture given at the International Society for Biological Therapy of Cancer 19th Annual Meeting, San Francisco, CA, 2004.
- "Design and Analysis of Phase II Clinical Trials," lecture given at the Meharry Medical College MPH Program, Nashville, TN, 2005.
- Recent Development of Computational Research in Quantitative Biomedical Science, A Software Package for MS MALDI-TOF Data Processing, seminar given at the EPSCOR Mini-symposium, Murfreesboro, TN, 2005.
- "Mass Spectrometry Data Processing using wavelets," lecture given at the 2005 AMS Spring Southeastern Sectional Meeting, Bowling Green, KY, 2005.
- "Bioinformatics Tools for Analyzing the Genomic/Proteomic Data," lecture given at the Mouse Models of Human Cancers Consortium Annual Meeting, Nashville, TN, 2005.
- "Bioinformatics, Biostatistics and Biomarkers," lecture given at the Mathematical Biosciences Institute (MBI) Workshop - Genomics, Proteomics, and Bioinformatics - Biomarkers in Cancer Research, Columbus, OH, 2005
- "The Statistical Challenges for Genomic/Proteomic Data Analysis," lecture given at the ICSA 2005 Applied Statistics Symposium, Washington DC, 2005.
- "Bioinformatics/Statistics/Mathematics and High Dimensional Data - From Genomic to Proteomic Research" lecture given at Shanghai Cancer Research Center, Shanghai, China, 2005.
- "Science of Doing Science Biostatistics/Bioinformatics," seminar given at UT Southwestern Medical Center, Dallas, TX, 2005.
- "Conquering Colorectal Disparities: Molecular Techniques & Examples of How They Can Be Used to Address Cancer Disparities," lecture given at Meharry-Vanderbilt Alliance, Franklin, TN, 2005.

- "MALDI TOF MS Data Processing Using Wavelets, Splines, and Statistical Techniques", AMS Sectional Meeting, Western Kentucky University, Bowling Green, Kentucky, 2005.
- "Biostatistical and Bioinformatics Approaches in High Dimensional Data Derived from High Throughput Assays: A Consumer Guide", tutorial given at The Fourth Asia Pacific Bioinformatics Conference, National Taiwan University, Taipei, Taiwan, 2006.
- "Statistical Challenges for Case-Cohort Study", seminar given at Danish Cancer Society, Copenhagen, Denmark, 2006.
- "Statistical Challenges in Genomic and Proteomic Cancer Research," lecture given at the Radiation Therapy Oncology Group (RTOG) Annual Meeting, Miami, FL, 2006.
- "Biological outcome measures in clinical trials," education session lecture given at the American Society Clinical Oncology (ASCO) Annual Meeting, Atlanta, GA, 2006.
- "The Statistical Issues in Proteomics Data Analysis," seminar given at The University of Texas MD Anderson Cancer Center (MDACC) Bioinformatics Workshop, Houston, TX, 2006.
- "Adaptive Trial Design and Data Analysis", seminar given at Tokai University, Japan, 2006.
- "Clinical Trials" taught at Tokai University, Japan, 2006.
- "A Lesson We Learn from the High Dimensional Data Generated from High Throughput Assays", seminar given at Mayo Clinic, Rochester, MN, 2006.
- "The Statistical Challenges for Clinical Trials Design in High Dimensional Biomarkers" seminar given at Duke University, Durham, NC, 2006.
- "The Wavelet-Based Algorithm for MALDI-TOF MS Data Pre-processing" seminar given at Department of Statistics, National Cheng Kung University, Tainan, Taiwan, 2006.
- "Recent Development of Mass Spectrometry Data Processing Using Mathematical Tools and Statistical Techniques" seminar given at Department of Statistics, Tamkang University, Taipei, Taiwan, 2006.
- "Multiscale Analysis and Proteomic Data Processing", (Joint Presentation w/ Dr. Don Hong), First International Conference on Computational Systems Biology, FuDan University, Shanghai, China, 2006.
- "Introduction to Wavelets and Multiscaling Analysis", (Joint Presentation w/ Dr. Don Hong), Seminar given at the College of Sciences, Ningbo University, Ningbo, Zhejiang, China, 2006.
- "Introduction to Wavelets and Applications in Data Analysis", (Joint Presentation w/ Dr. Don Hong), Seminar given at the Department of Mathematical Sciences, Guangxi University of Nationalities, Nanning, Guangxi, China, 2006.
- "Wavelets and Applications in Proteomic Data Analysis", (Joint Presentation w/ Dr. Don Hong), Seminar given at the Department of Computer Informatics Science and Mathematics, Cuiling University of Technology, Guiling, Guangxi, China, 2006.
- "Multiscaling Techniques and PCA/ICA/EMD for Proteomic Data Processing and Biomarkers Discovery", (Joint Presentation w/ Dr. Don Hong), Seminar given at the Center of Artificial Intelligence and Applications, Beihang University, Beijing, China, 2006.
- "Proteomic Data Analysis Using Wavelets and Splines", (Joint Presentation w/ Dr. Don Hong), Seminar given at the Department of Mathematics, Central Florida University, Orlando, Florida, 2006.
- "Phase II Trial Design and Analysis" lecture given at Meharry Medical College CRECD/MSCI Program, Nashville, TN, 2006.
- "Clinical Trials" taught at Tokai University, Isehara, Japan, 2007.
- "Statistical Challenges in Omic Data Analysis" seminar given at Shanghai Jiaotong University Cancer Research Institute, Shanghai, China, 2007.

- "Biomarkers Clinical Trials Design and Analysis for High-Dimensional Data," seminar given at Bioinformatics Center of Shanghai Institute of Biological Sciences (SIBS) & Chinese Academy of Sciences (CAS), Shanghai, China, 2007.
- "Missing Data Analysis — A Case Study of Denmark Childhood Cancer Survivors Cohort," lecture given at 3rd GCCT Investigators Meeting, Nashville, TN, 2007.
- "Wavelet Methods in Tumor Finger Prints Research", Seminar given at National Cheng Kung University, Taiwan, 2007.
- "High Dimensional Data Analysis," taught at Tokai University, Isehara, Japan, 2007.
- "Science of Doing Science – Bioinformatics & Biostatistics: A Lesson We Learned from Omics Research" Seminar at China Medical University School of Medicine, Taichung, Taiwan, 2008.
- "Biostatistical and Bioinformatics Approaches in High Dimensional Data Derived from High Throughput Assays" Seminar at China Medical University Biostatistics Center, Taichung, Taiwan, 2008.
- "Missing Data Analysis Workshop" lecture given at China Medical University Biostatistics Center, Taichung, Taiwan, 2008.
- "Clinical Trials Workshop" lecture given at China Medical University Biostatistics Center, Taichung, Taiwan, 2008.
- "Strategy of Multivariate Data Analysis Workshop" lecture given at China Medical University Biostatistics Center, Taichung, Taiwan, 2008.
- "Advanced Clinical Trials Design and Analysis," taught at Tokai University, Isehara, Japan, 2008.
- "The Challenges and Approaches in MALDI-TOF Experiment Design and Preprocessing Procedures," seminar given at Nagoya University School of Medicine, Nagoya, Japan, 2008.
- "Novel Phase II Clinical Trials Design," lecture given at AACR/ASCO Workshop Methods in Clinical Cancer Research, Vail, CO, 2008, 2009, 2010, 2011, 2012, 2013.
- "Advanced Statistical Considerations: Things you think you can do, but…," lecture given at ASCO 44th Annual Meeting, Educational Section of Advanced Concepts in Clinical Trial Design and Methodology, Chicago, IL, May 2008.
- "Design and Analysis of Clinical Trials — Concepts and Methodologies," seminar given at Tokai University, Isehara City, Japan, 2008.
- "Are We Ready to be the New Sheriffs in Town? Some issues of High Dimensional Data Analysis," seminar given at Tamkang University, Taiwan, 2008.
- "Innovative Trial Design for Biomarkers Research," seminar given at NCI Translational Science Meeting, Washington, DC, 2008.
- "High Dimensional Data Analysis," taught at Tokai University, Isehara, Japan, 2008.
- "Adaptive Design: A Shortcut to Personalized Medicine?" seminar given at Adaptive Design in Clinical Drug Development Conference, London, England, 2009.
- "Challenges in Biostatistics, Bioinformatics, and Omics Research," seminar given at National Cheng Kung University, Tainan City, Taiwan, 2009.
- "Advanced Clinical Trials Design and Analysis," taught at Tokai University, Isehara, Japan, 2009.
- "Adaptive Design: A Shortcut to Personalized Medicine?" seminar given at Tokai University, Isehara, Japan, 2009.
- "Advanced Statistical Considerations: Things you think you can do, but…," ASCO 45th Annual Meeting, Educational Section of Advanced Concepts in Clinical Trial Design and Methodology, Orlando, FL, 2009.
- "Advanced Clinical Trials," two-day workshop given at FDA, 2009.

- "Adaptive Design: A Shortcut to Personalized Medicine?" lecture given at ADAPT 2009 conference, Washington, DC, 2009.
- "A Novel Comprehensive Wave-form MS Data Processing Method," seminar given at the 2nd International Congress of Image and Signal Processing (CISP '09)/2nd International Conference on Biomedical Engineering and Informatics (BMEI '09), Tianjin, China, 2009.
- "Omics Era and Its Impact on Biomedical Research: Are we ready to be the new sheriffs in town?" seminar given at Shanghai Center for Bioinformation Technology, Shanghai, China, and Shanghai Jiao Tong University, Shanghai, China, 2009.
- "High Dimensional Data Analysis," taught at Tokai University, Isehara, Japan, 2009.
- "A Shortcut to Personalized Medicine? The power of adaptive designs," seminar given at Adaptive Design in Clinical Drug Development Conference, London, England, 2010.
- "Adaptive Clinical Trials in the Era of Personalized Medicine," seminar given at Tsukuba University, Ibaraki, Japan, 2010.
- "Omics Biomarkers Research: From Experimental Design to Data Analysis," lecture given at 2nd Niagara Lung Cancer Symposium, Niagara-on-the-Lake, Ontario, Canada, 2010.
- "Quantitative Sciences Integration: Future Direction of Biomedical Research in the USA," lecture given at Tokai University School of Medicine, Isehara, Japan, 2010.
- 'High-throughput Biomarker Adaptive Design — A Shortcut to Personalized Medicine?" lecture given at Adaptive Clinical Trials Conference, Washington DC, 2010.
- "Advanced Statistical Considerations: Things you think you can do, but…," ASCO 46th Annual Meeting, Educational Section of Advanced Concepts in Clinical Trial Design and Methodology, Chicago, IL, May 2010.
- "Applied Biostatistics and Bioinformatics," 5-day workshop taught at Shanghai Jiao Tong University, Shanghai, China, 2010.
- "Biostatistical Challenges in Omics Research," seminar given at National Cheng Kung University, Tainan, Taiwan, 2011.
- "Teaching Biostatistics with Tangible and Interesting Examples," seminar given at National Cheng Kung University, Tainan, Taiwan, 2011.
- "Design and Analysis of Translational Research," in Creating Collaborative Research Ethics Education with Costa Rica: Taught, 2011.
- "Advanced Biostatistics," 3-day workshop taught at Kitasato University, Tokyo, Japan, 2011.
- "US FDA case study" special lecture series at International Program for Clinical Research at Kitasato University, Tokyo, Japan, 2011.
- "Quantitative Sciences Integration in the Era of Personalized Medicine Research," seminar given at the International Conference on Applied Statistics, Taipei, Taiwan, 2011
- "Rigorous Quantitative Sciences Integration — the Foundation of the High-Dimensional Genomic Research," seminar given at 4th International Symposium on Cancer Metastasis and the Lymphovascular System: Basis for Rational Therapy, New York, 2011.
- "Rigorous Trial Design and the Ethics of Drug Development — Case Studies from US FDA and Duke Medical Center," lecture given at National Yang-Ming University, Taipei, Taiwan, 2011.
- "Rigorous Quantitative Sciences Integration — the Foundation of the Drug Approval in the Personal Genome Era," seminar given at Emerging Information and Technology Conference (EITC), University of Chicago, Chicago, IL, 2011.
- "A Study of the Effect of Radiation Therapy on Mitochondrial DNA Mutation Using Next Generation Sequencing," seminar given at the 9th International Bioinformatics Workshop (IBW2011), Fourth Military Medical School, Xi'an, China, 2011.

- "Advanced Biostatistics," 3-day workshop taught at Shanghai Jiao Tong University, Shanghai, China, 2011.
- "Early Phase Cancer Clinical Trials Workshop — A Road Map for Investigator Initiated Studies," symposium and 3-day worship taught at University of Malaya, Kuala Lumpur, Malaysia, 2011.
- "The Use of Next-Generation Sequencing Technology to Study the Effect of Radiation Therapy on Mitochondrial DNA Mutation," seminar given at Tamkang University, Taipei, Taiwan, 2011.
- "Rigorous Trial Design and Ethics of Drug Development," seminar given at National Tsing Hua University, Hsinchu, Taiwan, 2011.
- "Sample Size Calculation for Differential Expression Analysis of RNA-seq Data Under Poisson Distribution," seminar given at National Cheng Kung University, Tainan, Taiwan, 2011.
- "Advanced Biostatistics," 1-credit course taught at Tamkang University, Taipei, Taiwan, 2011.
- "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 given at National Cancer Center of Tokyo, Japan, 2012.
- "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?"12th Annual Targeted Therapy of Lung Cancer Meeting, Santa Monica, CA, 2012.
- "Methods in Cancer Research," 5-day workshop given at Al-Ahsa, Saudi Arabia, 2012.
- "The Challenges of the High-Density Biomarker Adaptive Trials," seminar given at Adaptive Designs in Clinical Drug Development, London, England, 2012.
- "Statistical Bioinformatics Challenges for Clinical Trial Design in the Era of High-Density Data Analysis," seminar given at AACR Annual Meeting, Chicago, IL, 2012.
- "Advanced Biostatistics," 5-day course given at Beijing University, Beijing, China, 2012.
- "Sample size calculation for differential expression analysis of RNA-seq data under Poisson distribution," seminar given at Indiana University Bloomington School of Informatics and Computing, Bloomington, IN, 2012.
- "Emerging Methods of Quantitative Biology," seminar given at the Nordic Neuroendocrine Symposium, Nashville, TN, 2012.
- "Introduction to Statistical Methods for High-Dimensional Data Analysis," seminar given at the Workshop for Chronic Disease Epidemiology and Prevention, Shanghai, China, 2012.
- "Recent Developments of the Statistical Bioinformatics Approaches to Designing and Analyzing Sequencing Data," seminar given at the International Workshop on Cancer Systems Biology, Jilin University, Changchun, China, 2012.
- "Novel Clinical Trial Designs in the Genomic Era," seminar given at the International Congress on Targeted Therapies in Cancer, Washington, DC, 2012.
- "Advanced Biostatistics with R," 5-day course given at Shanghai Jiao Tong University, Shanghai, China, 2012.
- "Adaptive Clinical Trial Design in the Era of High-Density Data Analysis," seminar given at ADAPT Congress 2012, Washington, DC. 2012.
- "Emerging Methods of Quantitative Biology," seminar given at EITA-Bio 2012, Princeton University, Princeton, NJ, 2012.
- "Emerging Methods of Quantitative Biology," seminar given at Moffitt Cancer Center Grand Rounds, Tampa, FL, 2012.
- "Bioinformatics in Oncology Clinical Trials" and "Novel Phase II Design," seminars given at Talent in Oncology Programme, Munich, Germany, 2012.
- "Emerging Methods of Quantitative Biology: What are the Statistical Challenges?" seminar given at National Cheng Kung University, Tainan, Taiwan, 2013.

- "Novel Trial Design for Sequencing Biomarkers," seminar given at 2013 Biomarkers Summit, London, United Kingdom, 2013.
- "Emerging Methods of Quantitative Biology" seminar given at FuDan University, Shanghai, China, 2013.
- "Big data, Genomics, and Precision Medicine", seminar given at Ohio State University Cancer Center, Columbus, OH, 2013.
- "Advanced Biostatistics," 3-day course given at Beijing University, Beijing, China 2013.
- "Novel Clinical Trial Designs in the Era of High-Density Biomarker Data" presentation given at Biomarkers Summit, London, UK, 2013.
- "Novel Phase II Design," seminars given at Talent in Oncology Programme, Amsterdam, Netherlands, 2013.
- "Advanced Biostatistics with R," 5-day course given at Shanghai Jiao Tong University, Shanghai, China 2013.
- "Big data and Biomedical Research: Where do we go from here", seminar given at Cancer Research and Biostatistics, Seattle, WA, 2013.
- "Bioinformatics in Biomarker Discovery", seminar given at Taipei Veterans General Hospital, Taipei, Taiwan, 2013.
- "Sample Size Estimation for the RNA-sequencing Data", seminar given at University of Pennsylvania, PA, 2013.
- "Clinical Trial Designs in the Genomic Era," seminar given at 11th Annual International Congress on Targeted Therapies in Cancer, Washington, DC, 2013.
- "Statistical Bioinformatics Challenges in the Era of Personalized Medicine in Cancer," worship given at Roswell Park Cancer Institute, Buffalo, NY, 2013.
- "Advanced Biostatistics," 5-day course given at Tamkang University, Taipei, Taiwan, 2013.
- "Genomics: From Research Tool to the Lung Cancer Clinic" presentation given at 15th World Conference on Lung Cancer, Sydney, Australia, 2013.
- "Novel Phase I Trial Designs" presentation given at 14th Annual Targeted Therapies of Lung Cancer Meeting, Santa Monica, CA, 2014.
- "Advanced Biostatistics with R," 3-day course given at National Institute of Biological Sciences, Beijing, China, 2014.
- "Insights in the Era of Personalized Cancer Therapy and Targeted Therapies: How to Progress Through Well-Conducted Phase I and II Clinical Trials", presentation given at AACR Annual Meeting, San Diego, 2014.
- "Computational Science: Leveraging Computer Data for Large Data Sets", presentation given at Thirteenth Annual Frontiers in Cancer Prevention Research Conference, New Orleans, LA, 2014.
- "Bioinformatics in oncology clinical trials" and "Reporting and interpreting statistics in clinical trial research," seminars given at Talent in Oncology Programme, Munich, Germany, 2014.
- "Big Data, Genomics, and Precision Medicine", presentation given at Peking University (PKU) Big Data Brainstorm Workshop, Beijing, China, 2014.
- "Big Data for Precision Median and Biomarker Discovery", seminar given at Albert Einstein College of Medicine, New York, NY, 2014.
- "Emerging Methods of Quantitative Biology", seminar given at the 2nd International Symposium of Gunma University, Gunma, Japan, 2014.
- "Statistical Challenges and Opportunities with Big Data", seminar given at University of Michigan School of Public Health, Ann Arbor, MI, 2014.

- "Bioinformatics for Dummies", presentation given at 13th Round Asia Oncology Forum, Hong Kong, 2014.
- "Basic Statistics", "Phase II Trial Designs", and "Phase III Trial Designs", lectures given at Methods in Clinical Research Workshop for Minority Physicians, Coral Gables, FL, 2014.
- "Big Data, Genomics, and Precision Medicine", seminar given at Peking University, Beijing, China, 2014.
- "Novel Phase II Trials" lecture given at AACR/ASCO Methods in Clinical Cancer Research Workshop, Vail, CO, 2014.
- "The Challenges of the high-Density Biomarker Trials Design" presentation given at Smart Trials Conference, London, UK, 2014.
- "Advanced Biostatistics," 4-day course given at National Cheng Kung University, Tainan, Taiwan, 2014.
- Fifth International Workshop on Cancer Systems Biology given at Jilin University, Changchun, China, 2015.
- "Data Science in the Era of the Precision Medicine", presentation given at the 40th Annual Congress Oncology Nursing Society (ONS), Orlando, FL, 2015
- "Advanced Biostatistics with R," 5-day course given at Shanghai Jiao Tong University, Shanghai, China 2015.
- "Emerging Methods of Quantitative Biology" presentation given at 12th annual International Bioinformatics Workshop (IBW), Harbin, China, 2015.
- "Evaluating Well Designed vs Poorly Designed Randomized Trials", "Phase II trial designs in Oncology", and "Biostatistics in Clinical Trials", lectures given at Talent Oncology Program (TOP) workshop, Hong Kong, 2015.
- "Advanced Biostatistics," 3-day course given at National Institute of Biological Sciences, Beijing, China, 2015.
- "Big Data Analysis for the Uninitiated", presentation given at AACR Annual Meeting, Philadelphia, PA, 2015.
- "Big Data in Top Medical Journals: Quantitative Biology for Reproducible Research and Publishing with Integrity", presentation given at Chinese Society of Clinical Oncology (CSCO) Annual Meeting, Xiamen, China, 2015.
- "Big Challenges of Big Data: Biomedical Science in the Petabyte Era", presentation give at Pacific Rim Cancer Biostatistics Conference, Seattle, WA, 2015.
- "Data Science in the Era of the Precision Medicine", seminar given at Osaka University School of Medicine, Osaka, Japan, 2015.
- "Phase III Trials", "Phase II Trials", and "Statistical Considerations in Clinical Trials", lectures given at Methods in Clinical Research Workshop for Minority Physicians, Los Angeles, CA, 2015.
- "Statistical Considerations in Protocol Development: From Hypothesis to Analysis" lecture given at AACR/ASCO Methods in Clinical Cancer Research Workshop, Vail, CO, 2015.
- "Bioinformatics in Oncology Clinical Trials", and "Biomarkers in Clinical Trials: Statistical Considerations in Design and Evaluation", lectures given at Talent Oncology Program (TOP) workshop, Singapore, 2015.
- "Data Tsunami as a Limiting Step in Using the All Omics Approach", presentation given at European Society for Medical Oncology (ESMO) Asia Annual Meeting, Singapore, 2015.
- "Big Data, Genomics and Precision Medicine in Oncology Research," Novel Phase I and Phase II Cinical Trial Designs," Statistics 101," "Important Statistics You Need to Know for Clinical Trials," The Challenges of High-Density Biomarker Adaptive Trials," talks given at the Canadian Oncology Resident Education at the Canadian Lung Cancer Conference, Vancouver, British Columbia, 2016.

- "Novel Phase I and Phase II Clinical Trial Designs," BC Cancer Agency Research Conference, Vancouver, British Columbia, 2016
- "Important Statistics You Need to Know for Clinical Trials," Canadian Oncology Resident Education at the Canadian Lung Cancer Conference, Vancouver, British Columbia, 2016.
- "Big Data, Omics, and Precision Medicine in Cancer Research," Chinese Society of Gynecology Oncology Annual Meeting, Beijing, China, 2016.
- "Clinical Trials Design Methods," two-part lecture given at the AACR Annual Meeting, New Orleans, LA, 2016.
- "Basic Biostatistics," "Phase II Clinical Trials," Phase III Clinical Trials," three-day lecture given at the Roswell Park Cancer Institute: Methods in Clinical Research Workshop, 2016.
- "The BETRNet Virtual Repository: A Key Network Resource for Collaboration," Barrett's Esophagus Translational Research Network (BETRNet) Steering Committee Meeting, Rockville, Maryland, 2016.
- "Advanced Biostatistics with R," 5-day course given at Shanghai Jiao Tong University, Shanghai, China 2016.
- "Novel Phase II Trials," lecture given at AACR/ASCO Methods in Clinical Cancer Research Workshop, Vail, CO, 2016.
- "Big Data, Omics, and Precision Medicine in Cancer," keynote lecture at 2nd International Conference on Translational Cancer Research, Tianjin, China, 2016.
- "Biostatistics in Clinical Trials," presentation given at Ta Talent in Oncology Programme lent in Oncology Programme (TOP) Asia Fundamentals Meetings, Taipei, Taiwan, 2016.
- "Evaluating Well-Designed vs. Poorly-Designed Randomized Trials," presentation given at Talent in Oncology Programme (TOP) Asia Fundamentals Meetings, Taipei, Taiwan, 2016.
- "Statistical Aspects of Omics Data Analysis Using the Random Compound Covariate," talk given at the 75th Annual Meeting of Japanese Cancer Association (JCA): Breakthroughs in Cancer Treatment: Collaboration of Basic Translatinal and Clinical Resarch, Tokyo, Japan, 2016.
- "Advanced Biostatistics," five-day lecture given at National Cheng Kung University, Tainan, Taiwan, 2016.
- "Biostatistics for Young Scientists," lecture given at Roche Young Scientist's Form, Hong Kong, China, 2017
- "Statistics in Oncology: Navigating Clinical Trials and Putting Data into Practice," lecture given at McGill University Visiting Speakers in Oncology Program, Quebec, Canada, 2017
- "Should the anti-cancer drugs be approved based on the non-randomized single-arm trials?" lecture given at 17th Annual Targeted Therapies of Lung Cancer Meeting, Santa Monica, CA, 2017
- "Big Data, Omics, and Precision Medicine," lecture given at AACR Annual Meeting, Meet-The-Experts Session, Washington, DC, 2017
- "How to Interpret the Omics Big Data and Apply to the Clinical Practice," lecture given at the Global Breast Cancer Conference, Jeju Island, South Korea, 2017
- "Advanced Biostatistics," 5-day lecture given at National Cheng Kung University, Tainan, Taiwan, 2017.
- "Advanced Biostatistics with R," 5-day course given at Shanghai Jiao Tong University, Shanghai, China 2017.

- "Bioinformatics in oncology: principles and application to trials for targeted agents," presentation given at Talent in Oncology Programme (TOP) Asia Fundamentals Meetings, Guangzhou, China, 2017.

- "Biostatistics: Statistical Controversies and Challenges in Reporting Clinical Trials," presentation given at Talent in Oncology Programme (TOP) Asia Fundamentals Meetings, Guangzhou, China, 2017.

- "Big Data, Omics, and Precision Medicine," presentation given at Institute of Genetics and Molecular and Cellular Biology (IGBMC), Strasbourg, Switzerland, 2017.

- "Common Statistical Errors and Mistakes in Cancer Research: How to Avoid Them," lecture given at American Association for Cancer Research (AACR) Annual Meeting, Chicago, IL, 2018.

- "Big Data, Smart Data, and Actionable Data in Precision Medicine," lecture given at American Association for Cancer Research (AACR) Annual Meeting, Chicago, IL, 2018.

- "Big Data, Smart Data, and Actionable Data in Precision Medicine," lecture given at Taiwan Breast Cancer Consortium and German Breast Group Joing Meeting, Taipei, Taiwan, 2018.

- "Identifying Actional Targets – Bioinformatics," lecture given at European Society for Medical Oncology (ESMO) 2018 Congress, Munich, Germany, 2018.

- "Big Data, Smart Data, and Actionable Data in Precision Medicine," lecture given at Fu Jen Catholic University, Taipei, Taiwan, 2018.

- "Debate: Which is most important efficacy endpoind in first line trials in advanced NSCLC PFS or OS - Point of View." IASLC 19th World Conference on Lung Cancer. Toronto, ON, 2018.

- "Shaping the Future of Precision Medicine and Healthcare," lecture given at the 3rd International Symposium on Translational Cancer Research, Tianjin, China, 2018.

- "Data Science in the Precision Medicine Era: Will Statisticians Lead or Follow?" lecture given at Department of Biostatistics, Columbia University, New York, 2018.

- "Bayeisan 101," and 'Bayesian Design - Challenges and prospects," lectures given at Paul Carbone Academy, Taipei, Taiwan, 2018.

- "REDCap and Open Science," lecture given at Natinal Cheng Kung University, Tainan, 2018.

- "Power in multiple testing: Sample size calculations for differential expression analysis of RNA-seq data." Lecture given as part of Sample Size and Power Workshop for Basic, Translational, and Clinical Studies, AACR Annual Meeting, Atlanta, GA, 2019.

- "Data Science: Shaping the Future of Precision Medicine and Healthcare." Investigators' and Site Coordinators' Opportunity for Research Excellence (I-SCORE) meeting, Rockville, MD, 2019.

- "Big Dacta, Omics and Precision Medicine." Investigators' and Site Coordinators' Opportunity for Research Excellence (I-SCORE) meeting, Rockville, MD, 2019.

- "Data science in the precision medicine era: Will statisticians lead or follow?" 3rd Pacific Rim Cancer Biostatistics Conference, Portland, OR, 2019.

- "From *BioVU* to *All of Us*: Shaping the future of precision medicine and healthcare." Beijing Summit on Data Science in Health, Beijing, China 2019.

3 Web-Based Courses

- "Basic Study Design in Clinical Trials," Bristol-Myers Squibb Protocol Training Course, 2002. http://www.midicorp.com/extranet/frameset.html
- "Bias Reduction in Clinical Trials," Bristol-Myers Squibb Protocol Training Course, 2002. http://www.midicorp.com/extranet/frameset.html
- "Trial Setup/Monitoring Considerations in Clinical Trials," Bristol-Myers Squibb Protocol Training Course, 2002. http://www.midicorp.com/extranet/frameset.html
- "Fundamentals of Clinical Trials," American Society of Clinical Oncology University Course, 2014, 2015. http://university.asco.org/fundamentals-clinical-trials.html
- "Adaptive Clinical Trials," Henry Steward Talks, Russell House London, United Kingdom, 2016.
- "Adaptive Clinical Trials: Future Directions," Henry Steward Talks, Russell House London, United Kingdrom, 2016.
- "Biostatistics," American Society of Clinical Oncology (ASCO), 2016. https://registrar.asco.org/Users/ActivityHomePage.aspx?ProductID=5518

4 Mentoring

- Ayumi Shintani, Department of Biostatistics, Vanderbilt University School of Medicine, faculty mentor, 2001 – 2007.
- Dercherng Lo, Department of Economics, Vanderbilt University College of Arts and Sciences. PhD committee, 2003 – 2005.
- Judith Dexheimer, Department of Bioinformatics, Vanderbilt University School of Medicine, PhD committee, 2006 – 2011.
- Fei Ye, Department of Biostatistics and Epidemiology, University of South Carolina. MS committee, 2004. PhD committee, 2004 – 2007.
- Elizabeth Kanter, Department of Biomedical Engineering, Vanderbilt University School of Medicine. PhD committee, 2005 – 2008.
- Debbie Wujcik, Department of Nursing, University of Utah. PhD committee, 2005 – 2008.
- Mark Harris, Department of Mathematics and Cancer Biology, Vanderbilt University School of Medicine, PhD committee, 2008 – 2009.
- Stephen Turner, Division of Human Genetics, Vanderbilt University School of Medicine, PhD committee, 2008 – 2010.
- Dr. Terri Ni, Division of Cardiovascular Medicine, Department of Medicine, Vanderbilt University School of Medicine, faculty mentor, 2003 – 2009.
- Dr. Andrew Yi, Division of Genetic Medicine, Vanderbilt University School of Medicine, faculty mentor, 2007 – present.
- Dr. Joshua Smith (M.D.), Department of Cell and Developmental Biology, Vanderbilt University School of Medicine, PhD Committee, 2009 – 2010.
- Benjamin Grady, Division of Human Genetics, Vanderbilt University School of Medicine, PhD qualifying exam committee, 2009; PhD committee, 2009 – present.
- Zeqiang Ma, Department of Biomedical Informatics, Vanderbilt University School of Medicine, PhD committee, 2010 – present.
- Olivia Veatch, Division of Human Genetics, Vanderbilt University School of Medicine, PhD qualifying exam committee, 2010.
- Emily Holzinger, Division of Human Genetics, Vanderbilt University School of Medicine, PhD qualifying exam committee, 2010.

- Dr. Mayur Patel (M.D.), Division of Trauma and Surgical Critical Care, Vanderbilt University School of Medicine, fellow mentoring committee, 2011 – present
- Dr. Bingshan Li, Ph.D., Division of Human Genetics, Vanderbilt University School of Medicine, faculty mentor, 2012 – present.
- Dr. Carlos Lopez, Ph.D., Department of Cancer Biology, Vanderbilt University School of Medicine, faculty mentor, 2012 – present.
- Dr. Qi Liu, Ph.D., Department of Biomedical Informatics, Vanderbilt University School of Medicine, faculty mentor, 2012 - present.
- Isaac Pence, Ph.D., Candidate. Department of Biomedical Engineering, Vanderbilt University School of Engineering, dissertation committee, 2013 – present
- Dr. Yan Guo, Ph.D., Department of Cancer Biology, Vanderbilt University School of Medicine, faculty mentor, 2013 – present.
- Dr. Michelle Ormseth, M.D., M.S.C.I., Department of Rheumatology, Vanderbilt University School of Medicine, faculty mentor, 2014 – present.
- Dr. Quanhu Sheng, Ph.D., Department of Cancer Biology, Vanderbilt University School of Medicine, faculty mentor, 2014 – present.
- Xue Zhong, Department of Biostatistics, Vanderbilt University School of Medicine, MS advisor, 2014 – 2015.
- Dr. Alicia K. Morgans, M.D., Division of Hematology/Oncology Vanderbilt University School of Medicine, faculty mentor, 2015 – present
- Dr. Anthony Daniels, M.D., M.Sc., Department of Opthamology and Visual Sciences, Vanderbilt University School of Medicine, co-mentor, 2016 – present
- Dr. Danxia Yu, Ph.D., Department of Epidemiology, Vanderbilt University School of Medicine, faculty mentor, 2016-present.
- Dr. Derek Smith, Ph.D., Department of Biostatistics, Vanderbilt University School of Medicine, Ph.D. advisor, 2017 – present
- Jun Qian, College of Basic and Applied Sciences, Middle Tennessee State University, MS mentor, 2017.
- Dr. Ryan Hsi, M.D. Department of Urologic Surgery, Vanderbilt University Medical Center. Faculty mentor 2017 – present

ACADEMIC SERVICE

1. **Have refereed papers for the following journals**
   a. *Science*
   b. *Journal of American Statistical Association*
   c. *Communications in Statistics*
   d. *Biometrical Journal*
   e. *American Medical Informatics Association*
   f. *Information Sciences: An International Journal*
   g. *New England Journal of Medicine (with Dr. David Johnson)*

h. *Cancer* (**Editorial Board Member**)

i. *Cancer Research*

j. *Southern Medical Journal*

k. Arteriosclerosis, Thrombosis, and Vascular Biology

l. *International Chinese Journal of Dentistry* (**Editorial Board Member**)

m. *Clinical Pharmacology and Therapeutics*

n. *Journal of Concrete and Applicable Mathematics* (**Guest Editor with Prof. Don Hong)**

o. *BMC Bioinformatics*

p. *Clinical Cancer Research* (**Editorial Board Member**)

q. Technology in Cancer Research and Treatment

r. Proteomics

s. Proceedings of the National Academy of Sciences

t. Cancer Prevention Research Journal (**Editorial Board Member**)

u. *Computational Statistics and Data Analysis*

v. Journal of Applied Statisticss

w. *Biological Procedures Online* (**Editorial Board Member**)

x. Clinical Trials

y. *Journal of Clinical Oncology*

z. *Carcinogenesis*

aa. Science Translational Medicine

bb. Proteomics — Clinical Applications

cc. Dataset Papers in Medicine

dd. PLoS ONE (**Statistical Advisory Board Member)**

ee. Journal of Thoracic Oncology (**Associate Editor**)

ff. Journal of Computational Systems Biology (**Editorial Board Member**)

gg. Journal of Nuclear Medicine (**Editorial Board Member**)

hh. JAMA Oncology (**Associate Editor**)

ii. Quantiative Biology (**Editorial Board Member**)

jj. JNCI (**Editorial Board Member**)

kk. JNCI Cancer Specturm (**Editorial Board Member**)

ll. Nature Communications

mm. Translational Cancer Research (**Editorial Board Member**)

2. American Statistical Association

a. International Science and Engineering Fair (ISEF): Special Awards Judge for American Statistical Association, 1997.

b. Mid-Tennessee Chapter: Council Representative, 1998 – 1999.

c. Mid-Tennessee Chapter: President, 1999.

d. Council of Chapter Office: Vice Chair Candidate, 2001.

e. Council of Chapters Governing Board: Vice Chair, 2002 – 2004.

f. Council of Chapters Nominations Committee: Member, 2004 – 2005.

g. Council of Chapters: Candidate for Chair Elect Position, 2010.

3. Society for Epidemiologic Research

a. Annual Meeting Abstracts Reviewer, 1997.

b. Annual Meeting Abstracts Reviewer, 1998.

c. Annual Meeting Abstracts Reviewer, 1999.

4. National Cancer Institute

a. NCI Study Section Special Emphasis Panel (ZCA1 SRRB-X (CC)): Member, 1999.

b. NCI Subcommittee D-Clinical Studies Review Panel (P01-CA72008-04): Member, 2000.

c. NCI Subcommittee E-Cancer Epidemiology, Prevention & Control Studies Review Panel (P01-CA88961-01): Member, 2000.

d. NCI P50 Cancer Center Support Grant (CCSG) Review Panel (University of Wisconsin, Madison): Member, 2000.

e. NCI Subcommittee E-Cancer Epidemiology, Prevention & Control Studies Review Panel (NCI-E GRB-R(Y)): Member, 2001.

f. NCI Subcommittee C-Basic and Preclinical Review Panel (NCI-C GRP-P (Q2)): Member, 2001.

g. NCI 9th SPORE Investigators' Workshop: Invited Speaker, 2001.

h. NCI Lymphoma Specialized Programs of Research Excellence (SPORE) Review Panel: Member, 2002.

i. NCI Lung SPORE Annual Meeting, Denver, Colorado, Session of Methods of Array Analysis: Chair, 2002.

j. NCI PO1-CA096888-01C4 "Molecular Gene and Radiation Therapies for Cancer" site visit reviewer: Member, 2002.

k. NCI Special Emphasis Panel of Biology and Transplantation of Human Stem Cell (ZCA1 GRB-W(01)): Member, 2002.

l. NCI Subcommittee E-Cancer Epidemiology, Prevention & Control Review Panel (NCI-E GRB-P (K2)): Member, 2002.

m. NCI Subcommittee C — Basic & Preclinical Review Panel (NCI-C GRB-P (K1)): Member, 2002.

n. NCI PO1-CA100336-01 Review Panel "Molecular Targets in Prostate Cancer": Member, 2002.

o. NCI Pancreatic Specialized Programs of Research Excellence (SPORE) Review Panel: Member, 2003.

p. NCI PO1 CA 104668-01 Review Panel "Mechanism-Based Approach for the Management of Prostate Cancer" (NCI-C GRB-P (X8)): Member, 2003.

q. NCI Ovarian & Breast Specialized Programs of Research Excellence (SPORE) Review Panel: Member, 2003.

r. NCI PO1 CA 104106-01 Review Panel "Signaling and Progression in Prostate Cancer" (NCI-C GRB-R (C2)): Member, 2003.

s. NCI Leukemia & Lymphoma Specialized Programs of Research Excellence (SPORE) Review Panel: Member, 2003.

t. NCI Developmental Therapeutics Study Section: Member, 2003 – 2008.

u. NCI UO1 CA 107948-01 Review Panel “The Pediatric Brain Tumor Consortium” (NCI – ZCA1 GRB-F (J1)): Member, 2003.

v. NCI Subcommittee D — Clinical Studies PO1 CA112359-01 Review Panel “New Approaches to the Treatment of Neuroblastomas” (NCI-D RPRB (S3)): Member, 2004.

w. NCI Subcommittee A — Cancer Centers review panel (NCI-A RTRB-Z (E1)), 2004.

x. NCI P50 Cancer Center Support Grant (CCSG) Review Panel (University of Pennsylvania Comprehensive Cancer Center): Member, 2004.

y. NCI GI/Pancreas Inter-SPORE Meeting: Section of Data Analysis: Chair, Nashville, TN, 2004.

z. NCI GI/Pancreas Inter-SPORE Meeting: Invited Speaker, Nashville, TN, 2004

aa. NCI Clinical Oncology Study Section: Ad Hoc Member, 2005.

bb. NCI Specialized Programs of Research Excellence (SPORE) in Ovarian — GYN Cancer Review panel: Member, 2005.

cc. NCI P50 Cancer Center Support Grant (CCSG) Review Panel (University of Colorado Comprehensive Cancer Center): Member, 2005.

dd. NCI Etiologic and Early Marker Studies (EEMS) Review Panel: Member, 2005 – present.

ee. NCI Avon Breast Cancer Research Review Panel: Member, 2005.

ff. NCI PO1 Experimental Therapeutics Cluster Review Panel: Member, 2005.

gg. NCI ZCA1 GRB-S (01) Centers of Cancer Nanotechnology Excellence (CCNE). National Cancer Institute Special Emphasis Panel: Member, 2005.

hh. NCI ZRG1 ONC-J (02) M: COX-2 Inhibition of T-Cells in Human Lung Cancer. Center for Scientific Review Special Emphasis Panel: Member, 2005.

ii. NCI Translational Research Workshop Group (TRWG): Invited Speaker, 2006.

jj. NCI Intramural Program: Biostatistics Branch Review Panel: Member, 2006.

kk. NCI SPORE Breast Cancer Research Review Panel: Member, 2006.

ll. NCI Avon Breast Cancer Research Review Panel: Member, 2006.

mm. NCI Special Emphasis Panel (SEP) L30 and L40: Member, 2006 – 2009.

nn. NCI Discovery and Development Special Emphasis Panel (SEP): Member, 2006 – 2007.

oo. NCI Specialized Programs of Research Excellence (SPORE) Standing Special Emphasis Panel (SEP): Member, 2007 – present

pp. NCI Workshop on Implementation of Biomarkers Evidence in Translational Research Organizing Committee: Member, 2007.

qq. NCI P50 Cancer Center Support Grant (CCSG) Review Panel (Kimmel Cancer Center at Thomas Jefferson University): Member, 2007.

rr. NCI Avon Progress for Patients Blue Ribbon Panel Advisory Board: Member, 2007.

ss. NCI/NIH Cancer Genome Atlas (TCGA) Data Portal Use Workshop: Invited participant, 2008.

tt. NCI Special Emphasis Panel on Comprehensive Systems Genetics of Cancer: Member, 2008.

uu. NCI P01 Molecular Oncology Special Emphasis Panel: Member, 2008.

vv. NCI Translational Science Meeting: Invited Speaker, 2008.

ww. NCI Subcommittee J — Population and Patient-Oriented Training Study Section: Member, 2008 – 2009.

xx. NCI ZCA1 RTRB-2 Career Development Awards Panel: Member, 2008.

yy. NCI P01 Molecular Oncology (Basic, Translational, and Clinical Studies) Special Emphasis Panel: Member, 2009.

zz. NCI P01 Molecular Oncology (Basic, Translational, and Clinical Studies) Special Emphasis Panel: Member, 2010.

aaa. NCI P50 Cancer Center Support Grant (CCSG) Review Panel (Pennsylvania State Cancer Center): Member, 2010.

bbb. NCI SBIR Phase II, Integrating patient-reported outcomes in hospice and palliative care practices, Study section: Chair, 2010.

ccc. NCI LRP Review Panel: Member, 2011.

ddd. NCI Cancer Diagnostics and Treatments SBIR/STTR review panel: Member, 2011.

eee. NCI P50 Cancer Center Support Grant (CCSG) Review Panel (Maryland Greenebaum Cancer Center): Member, 2011.

fff. NCI P50 Cancer Center Support Grant (CCSG) Review Panel (University of Virginia Cancer Center): Member, 2011.

ggg. NCI P50 Cancer Center Support Grant (CCSG) Review Panel (Johns Hopkins Kimmel Cancer Center): Member, 2011, 2016.

hhh. NCI P01 ZCA1 GRB-T (M1) Special Emphasis Panel: Member, 2012.

iii. NCI P30 Cancer Center Support Grant (CCSG) Review Panel (New York University Cancer Institute): Member, 2012.

jjj. NCI P30 Cancer Center Support Grant (CCSG) Review Panel (Kimmel Cancer Center at Thomas Jefferson University): Member, 2012.

kkk. NCI P30 Cancer Center Support Grant (CCSG) Review Panel (University of Chicago Comprehensive Cancer Center): Member, 2012.

lll. NCI Cancer Immunopathology and Immunotherapy (CII) Study Section: Member, 2013-2017.

mmm. NCI P30 Cancer Center Support Grant (CCSG) Review Panel (Fred Hutchinson/University of Washington Consortium): Member, 2014.

nnn. NCI P30 Cancer Center Support Grant (CCSG) Review Panel (University of Texas Health Science Center at San Antonio (UTHSCSA)): Member, 2014.

ooo. NCI P30 Cancer Center Support Grant (CCSG) Review Panel (Cold Spring Harbor Laboratory Cancer Center): Member, 2016

ppp. NCI P30 Cancer Center Support Grant (CCSG) Review Panel (The Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins University): Member, 2016.

qqq. NCI ZCA1 RPRB-N (O)1 Special Emphasis Panel; SPORE Review: Member, 2017.

5. VICC Clinical Breast Cancer Journal Club: Statistical Commentator, 1998 – present.

6. Vanderbilt University Chinese Student Association: Advisor, 1998 – 2002.

7. 1998 Chinese Youth Goodwill Mission from Taiwan: Co-sponsor, 1998.

8. NIH SRA, MEP Study Section Special Emphasis Panel (ZRG1-MEP-04S): Member, 1999.

9. U.S. Army Medical Research and Materiel Command (USAMRMC) Breast Cancer Research Program (BCRP): Scientist Reviewer, Epidemiology, 1999.

10. International Biometric Conference, Berkeley, California, Section of Correlated Binary Data: Chair, 2000.

11. Vanderbilt University School of Medicine Admission Interview Process: Faculty Interviewer, 2000 – 2001.

12. Joint Statistical Meetings Invited Sessions Program: Section on Statistical Consulting: Organizer, 2001.

13. Joint Statistical Meetings Invited Sessions Program: Invited Speaker, 2001.

14. International Chinese Statistical Association: Section on Recent Statistical Research in Cancer Studies: Invited Speaker, Philadelphia, PA, 2002.

15. American Association for Cancer Research (AACR): Education Session of Array and Gene Expression: Invited Speaker, San Francisco, CA, 2002.

16. International Association for the Study of Lung Cancer: Symposium of Molecular Taxonomy of Lung Cancer: Invited Speaker, Vancouver, BC Canada, 2003.

17. American Association for Cancer Research (AACR) International Conference on "Frontiers in Cancer Prevention Research": Scientific Committee Member, Phoenix, AZ, 2003.

18. 2004 Targeted Therapies for the Treatment of Lung Cancer Investigators' Meeting: Invited Speaker, San Diego, CA, 2004.

19. 2004 American Association for Cancer Research/American Society of Clinical Oncology Workshop Methods in Clinical Cancer Research: Invited Faculty Member, Vail, CO, 2004-2013.

20. International Epidemiology Institute 2004 Course on Molecular Epidemiology: Invited Faculty Member, Nashville, TN, 2004.

21. Joint NCI-FDA Workshop on Research Strategies, Study Design and Statistical Approaches to Biomarkers Validation for Cancer Diagnosis and Detection: Invited Faculty, Washington DC, 2004.

22. International Society for Biological Therapy of Cancer 19th Annual Meeting: Invited Speaker, San Francisco CA, 2004.

23. IASLC/ASCO Consensus Conference on Bronchioloaveolar Cell Carcinoma: Invited Panel Discussant, New York, NY, 2004.

24. Targeted Therapies for the Treatment of Lung Cancer Investigators' Meeting: Invited Faculty, Steamboat Springs, CO, 2005.

25. Mathematical Biosciences Institute (MBI) Workshop — Genomics, Proteomics, and Bioinformatics — Biomarkers in Cancer Research: Invited Faculty, Columbus, OH, 2005.

26. ICSA 2005 Applied Statistics Symposium: Invited Faculty, Washington DC, 2005.

27. Spline and Wavelet Applications in Biostatistics and Actuarial Mathematics, (With Dr. Don Hong). Invited presentation and Minisymposium Organizer, Athens, GA, 2005.

28. 11th World Conference on Lung Cancer, Invited Speaker, Barcelona, Spain, 2005.

29. 47th Anniversary Annual Conference, The American Associate for Chinese Studies: Chair and local organizing committee: Member, Nashville, TN, 2005.

30. NIH National Institute on Alcohol Abuse and Alcoholism Special Emphasis Panel: Member, 2005.

31. Workshop on Mathematical Tools and Statistical Techniques for Quantitative Medical Data Analysis. Scientific Committee, Member, 2005.

32. Radiation Therapy Oncology Group (RTOG) Annual Meeting: Invited Speaker, Miami, FL, 2006.

33. 42nd American Society Clinical Oncology (ASCO) Annual Meeting: Invited Faculty Member, Atlanta, GA, 2006.

34. 4th Asia Pacific Bioinformatics Conference, Invited Tutorial Speaker, Taipei, Taiwan, 2006.

35. NSA Workshop on Mathematical Tools and Statistical Techniques for Quantitative Medical Data Analysis, Scientific Committee: Member, Johnson City, TN, 2006.

36. Hawaii International Conference on Statistics, Math, and Related Fields: Abstract Reviewer, Section Chair, Honolulu, HI, 2007.

37. 6th-Sino-Japan-Korea Bioinformatics Training Course: Invited Faculty, Shanghai, China, 2007.

38. FDA Office of Women's Health Intramural Science Program: Expert Reviewer, 2007.

39. 12th World Conference on Lung Cancer, International Association for the Study of Lung Cancer: International Scientific Committee: Member, Seoul, Korea, 2007.

40. NSF Workshop on Quantitative Proteomic Data Analysis: Invited Plenary Speaker, Murfreesboro, TN, November 2007.

41. 2nd Adaptive Designs in Clinical Drug Development: Invited Speaker, London, UK, 2008.

42. Targeted Therapies for the Treatment of Lung Cancer Meeting: Invited Speaker, Santa Monica, CA, February 2008.

43. Susan G. Komen Foundation Promise Grant: Program Reviewer, Washington, DC, 2008.

44. ENAR, Panel on Genomics and Microarray Analyses: Chair, Arlington, VA, 2008.

45. AACR Annual Meeting 2008, "Clinical Trial Design Workshop Part 1: A Journey from Classical to Innovative Approaches": Invited Panel Member, San Diego, 2008.

46. 2008 Biostatistics and Bioinformatics Workshop on High Dimensional Data Analysis: Co-Organizer, Taipei, Taiwan, 2008.

47. Lung Cancer Symposium 2008, Invited Speaker, Niagara-on-the-Lake, Ontario, Canada, 2008.

48. AACR Annual Meeting 2008: Invited Faculty, San Diego, 2008.

49. ASCO 44th Annual Meeting, Educational Section of Advanced Concepts in Clinical Trial Design and Methodology: Invited Speaker, Chicago, IL, May 2008.

50. 13th World Conference on Lung Cancer, International Association for the Study of Lung Cancer: International Scientific Committee: Member, San Francisco, 2008-2009.

51. American Association for Cancer Research (AACR) 2009 Program Committee, Biostatistics in Clinical Trials Section: Chair, 2008.

52. Susan G. Komen for the Cure's Promise Grants Scientific Peer Review Committee: Member, 2008 – 2012.

53. American Society for Clinical Oncology Cancer Research Committee: Member, 2008 – present.

54. Canadian Cancer Society Research Institute Program Project Review Panel: Member, 2009.

55. ASCO 45th Annual Meeting, Educational Section of Advanced Concepts in Clinical Trial Design and Methodology: Invited Speaker, Orlando, FL, 2009.

56. 13th World Conference on Lung Cancer, International Association for the Study of Lung Cancer: International Scientific Committee: Member, San Francisco, 2009.

57. NIH/CSR ZRG1 OTC-X (14) B Experimental Cancer Therapeutics SBIR/STTR study section: Member, 2009.

58. AACR/ASCO Capitol Hill Lobby Day: Member, 2009.

59. American Association for Cancer Research 8th Annual International Conference on Frontiers in Cancer Prevention Research: Scientific Review Committee Member, 2009.

60. NIH/CSR ZRG1 OTC-X (14) B Experimental Cancer Therapeutics SBIR/STTR Study section: Member, 2010.

61. Susan G. Komen for the Cure Targeted Therapies (TT2) grant: Review panel member, Dallas, TX, 2009.

62. NIH Gastrointestinal Cancers Special Emphasis Panel: Member, 2010.

63. Cancer Society Research Institute, Review Panel for the Canadian Breast Cancer Research Alliance Special Research Competition on Predictive Oncology, Member, 2010.

64. 2nd Lung Cancer Symposium, Invited Speaker, Niagara-on-the-Lake, Ontario, Canada, 2010.

65. ASCO 46th Annual Meeting, Educational Section of Advanced Concepts in Clinical Trial Design and Methodology: Invited Speaker, Chicago, IL, May 2010.

66. Susan G. Komen for the Cure Research Programs grant: Review panel member, Dallas, TX, 2011.

67. AACI/AACR/ASCO Capitol Hill Lobby Day: Member, 2010.

68. American College of Radiology Imaging Network Biospecimen Review Committee: Member, 2010 – present.

69. American Society for Clinical Oncology Cancer Foundation Grants Selection Committee: Member, 2010 – present.

70. The 9th International Bioinformatics Workshop (IBW2011): Invited Speaker, Xi'an, China, 2011.

71. 4th International Symposium on Cancer Metastasis and the Lymphovascular System: Basis for Rational Therapy: Biomarkers and Informatics: Session Chair, New York, 2011.

72. 14th World Conference on Lung Cancer, International Association for the Study of Lung Cancer: International Scientific Committee: Member, Amsterdam, Netherlands, 2011.

73. 2012 AACR Annual Meeting Scientific Program Committee: Member, 2011.

74. International Workshop on Cancer Systems Biology (ICSB) Steering Committee: Member, 2011 – present.

75. Aduro BioTech CRS-207 & GVAX Pancreas Vaccine with Cyclophosphamide Study Data and Safety Monitoring Committee: Member, 2011.

76. Immunogen Data Safety and Monitoring Board: Member, 2012.

77. Talent in Oncology Programme (TOP): Invited Speaker, Munich, Germany, 2012.

78. 2012 Chicago Thoracic Symposium: Abstract Reviewer, Program Committee Member, and Chair of Keynote Lectures, 2012.

79. 2012 Methods in Cancer Research Workshop, Scientific Committee: Member, Al-Ahsa, Saudi Arabia, 2012.

80. 2012 AACR Annual Meeting, Clinical Trial Design in the Era of High-Density Data Analysis Session: Chairperson, 2012.

81. International Conference on Intelligent Biology and Medicine: General Chair, Nashville, TN, 2012.

82. Talent in Oncology Programme (TOP): Invited Speaker, Amsterdam, Netherlands, 2013.

83. 11th Annual International Congress on Target Therapies in Cancer: Invited Speaker, Washington, DC, 2013.

84. International Conference on Intelligent Biology and Medicine: General Chair, Nashville, TN, 2013.

85. Brain Tumour Charity, Peer Review Committee: Member, 2013.

86. 2014 AACR Program Committee, Clinical Research Subcommittee: Chairperson of the Biostatistics in Clinical Trials, 2014.

87. Grand Rounds, Roswell Park Cancer Institute: Invited Speaker, Buffalo, NY, 2013.

88. International Association for the Study of Lung Cancer (IASLC) 15th World Conference on Lung Cancer: Invited Speaker, Sydney, Australia, 2013.

89. International Clinical Trials Workshop (ICTW) Working Group: Member, 2014 – 2017.

90. Roche pRED Data Monitoring Committee of the MDM2 phase 2/3 trial in AML patients: Member, 2014.

91. Peking University (PKU) Big Data Brainstorm Workshop: Chair, Beijing, China, 2014.

92. Institute of Medicine (IOM) Committee on Policy Issues in the Clinical Development of Biomarkers for Molecularly Targeted Therapies: Member, 2014 – present.

93. AACR Education Program Committee: Member, 2015 – present

94. 2015 Joint Statistical Meeting: Joint Presenter, "Two-Stage Modified Toxicity Probability Interval Design for Low Target Toxicity Rate." Seattle, Washington, 2015.

95. Pacific Rim Cancer Biostatistics Conference: Chair, "Phase III Trials." Seattle, Washington, 2015.

96. MMY3004 Interim Analysis Meeting, Vienna, Austia, 2015.

97. EITA-Bio 2015: Recent Advances in Biomedical Research Conference: Program Steering Committee: Member, National Taiwan University, Taiwan, 2015.

98. South Big Data Hub Meeting, Georiga Tech Global Learning Center, Atlanta, GA, 2015.

99. ESMO Asia Congress Annual Meeting: Invited Speaker, Marina Square, Singapore, 2015.

100. Roche WO29519 Constitutional Independent Data Monitoring Committee Meeting, Barcelona, Spain, 2016.

101. Cold Spring Harbor Laboratory Cancer Center Site Visit Invitation, Woodbury, New York, 2016.

102. Targeted Therapies for the Treatment of Lung Cancer Meeting: Invited Speaker, Santa Monica, CA, 2016.

103. Canadian Oncology Resident Education Conference: Invited Speaker, Vancouver, British Columbia, 2016.

104. Boehringer Ingelheim Meeting: Invited Speaker, Vancouver, British Columbia, 2016.

105. British Columbia Cancer Agency Grand Rounds: Invited Speaker, Vancouver, British Columbia, 2016.

106. British Columbia Cancer Agency Research Conference: Invited Speaker, Vancouver, British Colubmia, 2016.

107. Canadian Oncology Resident Education at the Canadian Lung Cancer Conference: Invited Speaker, Vancouver, British Columbia, 2016.

108. Career Development and Mentor Committee for Early-Stage Faculty, American Association of Cancer Research (AACR) Annual Meeting: Chair, New Orleans, LA, 2016.

109. Chinese Society of Gynecology Oncology Annual Meeting: Invited Speaker, Beijing, China, 2016.

110. Roswell Park Cancer Institute: Methods in Clinial Research Workshop, Invited Lecturer, Fort Lauderdale, FL, 2016.

111. 2016 Barrett's Esophagus Translational Research Network (BETRNet) Steering Committee Meeting: Speaker, Rockville, MD, 2016.

112. American Association for Cancer Research (AACR) /American Society of Clinical Oncology (ASCO) Workshop Methods in Clinical Cancer Research: Course Director, Vail, CO, 2014-2016.

113. Second International Symposium on Translational Cancer Research, Keynote Speaker, Tianjin, China, 2016.

114. Talent in Oncology Programmes (TOP) Asia Fundamentals Meetings, Invited Speaker, Taipei, Taiwan, 2016.

115. The 75th Annual Meeting of the Japanese Cancer Association (JCA), Invited Speaker, Tokyo, Japan, 2016.

116. The 17th Annual International Association for the Study of Lung Cancer (IASLC) World Conference on Lung Cancer, Conference Committee: Trial Design/Statistics, Vienna, Austria, 2016.

117. Ontario Institute for Cancer Research (OICR) Translational Research Initiatives: Hospital for Sick Children, Neurosurgery, Biostatistical Reviewer, Ontario, Canada, 2016

118. Ontario Institute for Cancer Research (OICR) Translational Research Initiatives: Princess Margaret Cancer Centre and Ottawa Hospital Research Institute, Immunocology, Biostatistical Reviewer, Ontario, Canada, 2016.

119. European Society for Medical Oncology (ESMO) Asia 2016 Congress, Invited Speaker, Singapore, 2016.

120. American Society of Clinical Oncology (ASCO) International Clinical Trials Workshops (ICTW), Course Director, Luoyang, China, 2017.

121. AACR Annual Meeting Clinical Trials Committee Member, 2017-2019.

122. Roche Hong Kong Young Scientist Forum, Invited Speaker, Hong, Kong, China, 2017

123. McGill University Visiting Speakers Program in Oncology, Invited Speaker, Quebec, Canada, 2017

124. 2017 AMIA Annual Symposium: Reviewer, 2017

125. AACR Annual Meeting 2018 Program Committee, Co-Chair, 2017 – present

126. Boehringer Ingelheim Meeting: Invited Speaker, Vancouver, British Columbia, 2017

127. American Association of Cancer Research (AACR) Annual Meeting: AACR-Minority and Minority-Serving Institution Faculty Scholar, Washington, DC, 2017

128. ASCO Annual Meeting Scientific Program Committee-Biostatistics, Member, 2017

129. Global Breast Cancer Conference, Invited Speaker, Jeju Island, South Korea, 2017

130. Urological Association of Chinese Hospital Association Annual Meeting, Invited Speaker, Wuhan, China, 2017

131. Talent in Oncology Programmes (TOP) Asia Fundamentals Meetings, Invited Speaker, Guangzhou, China, 2017.

132. Institute of Genetics and Molecular and Cellular Biology (IGBMC), Invited Speaker, Strasbourg, Switzerland, 2017.

133. AACR NextGen Star, Applicant Reviewer, 2017

134. The 27th Taiwan Statistics Conference, Keynote Speaker, 2017

135. Shanghai Jiaotong University Summer Institute Statistical Workshop: Course Director, Shanghai, China, 2017

136. Springer Nature: Beyond Developing Clinical Trials: Successful Communication of Your Research, Invited Faculty, Guangzhou, China, 2017

137. Institut de Génétique et de Biologie Moléculaire et Cellulaire (IGMBC), ILLKIRCH, Invited Speaker, Cédex, France, 2017

138. 18th IASLC World Conference on Lung Cancer, Invited Speaker, Yokohama, Japan, 2017

139. American Society of Clinical Oncology (ASCO) International Clinical Trials Workshop (ICTW), Chairperson and Invited Speaker, Louyang, China, 2017

140. 2017 San Antonio Breast Cancer Symposium, Invited Speaker

141. Tamkang University Statistical Workshop, Course Director, Taipei, Taiwan, 2017

142. The Cancer Institute and Hospital, Chinese Academy of Medical Sciences: The Workshop of the Clinical Research and Statistical Challenges, Invited Speaker, Beijing, China, 2017

143. 2nd Pacific Rim Cancer Biostatistics Workshop, Co-Chair, Kanazawa, Japan, 2017

144. 2018 Young Scientists' Forum, Invited Speaker, Hong Kong, Hong Kong

145. 18th Annual Targeted Therapies of the Treatment of Lung Cancer, Invited Faculty, Santa Monica, California

146. 2018 Taiwan Breast Cancer Consortium and German Breast Group Joing Meeting, Invited Speaker, Taipei, Taiwan

147. 20th Edition of the ECCO-AACR-EORTC-ESMO Workshop on Methods in Clinical Cancer Research, Invited Faculty, Zeist, Netherlands, 2018

148. Taiwan Statistical Association Annual Meeting, Keynote Speaker, 2018.

149. 2018 Joint Statistical Meetings: Joint Presenter, "p-Value estimation for the Risk Source of a Prediction Model." Vancouver, BC.

150. Barrett's Esophagus Translational Research Network (BETRNet) Steering Committee Annual Meeting, Session leader, Philadelphia, PA, 2018

151. IASLC 19th World Conference on Lung Cancer, "Which is most important efficacy endpoint in first line trials in advanced NSCLC PFS of OS - Point of view: OS." Toronto, ON, 2018

COMMITTEES

Vanderbilt University

- Vanderbilt University Faculty Senate, 2004 – 2007.
- Vanderbilt Community Giving Campaign Allocations Committee: member, 2006 – 2007.
- Vanderbilt Senate Consultative Committee member, 2007.
- Vanderbilt Academic Policies and Services Committee (APS): member; 2004 – 2007.
- Vanderbilt Academy for Excellence in Teaching: member, 2013 – present.
- Advanced Computing Center for Research and Education (ACCRE): steering committee member, 2015 – present.
- Vanderbilt Data Science Visions Working Group: Co-Chair, 2017 – present.
- Executive Committee of Executive Faculty, 2018 - Present

Vanderbilt University School of Medicine

- Vanderbilt-Ingram Comprehensive Cancer Center Clinical Protocol Review Committee: Member, 1995 – 2001.
- Vanderbilt-Ingram Comprehensive Cancer Center Clinical Trials Office Steering Committee: Member, 1998 – present.
- Vanderbilt-Ingram Comprehensive Cancer Center Biostatistics Faculty Search Committee: Chairman, 1998.
- Information Policy Advisory Committee Database Subcommittee: Member, 1999.
- Bioinformatics Graduate Programs Admissions Committee: Member, 2001.
- Data Center for Large Clinical Trials Multidisciplinary Group Committee: Member, 2001 – present.
- Vanderbilt-Ingram Comprehensive Cancer Center Data Safety and Monitoring Committee: Member, 2001 – present.

- Vanderbilt-Ingram Comprehensive Cancer Center Clinical Protocol Scientific Review Committee: Member, 2001 – present.
- Vanderbilt University Faculty Mentoring Committee: Ayumi Shintani, Ph.D., Health Services Research/Biostatistics, 2001 – 2007.
- Vanderbilt University Faculty Mentoring Committee: Terri Ni, Ph.D., Genetic Medicine/ Cardiovascular Medicine, 2003 – 2009.
- Vanderbilt University Faculty Mentoring Committee: Andrew Yi, Ph.D., Genetic Medicine, 2007 – present.
- Data Safety and Monitoring Committee: RAAS, Inflammation and Post-Operative Atrial Fibrillation, member, 2003 – present.
- Vanderbilt University Department of Biostatistics, Promotion and Tenure Committee: Member, 2003 – present.
- Vanderbilt University Department of Biostatistics, Faculty and Search Committee: Member, 2003 – present.
- Vanderbilt University Microarray Core Steering Committee: Member, 2006 – present.
- Ayers Institute Steering Committee: Member, 2008 – present.
- Data Safety and Monitoring Board: Inotropic Drugs and Risk of Postoperative Atrial Fibrillation: Member, 2009 – present.
- Data Safety and Monitoring Board: Antioxidant Enzyme Induction as a New Approach to Therapy in Patients with Asthma: Member, 2009 – present.
- Emerging Information and Technical Conference (EITC) Biomedical Technology Steering Committee: Member, 2011 – present.
- BioVU Steering Committee: Member, 2012 – present.
- K25 Grant Mentoring Committee: David Smith, Ph.D., Department of Radiology and Radiological Sciences, Vanderbilt University, 2013 - present.
- Genetics Executive Committee: Member, 2014 – present.
- Executive Committee of the Executive Faculty: Member, 2014-2015, 2019 - present
- Faculty Appointments and Promotions Committee of the Vanderbilt School of Medicine, 2015-2017.
- Faculty Advisory Committee for Research IT: Member, 2015-present.
- Grant W. Liddle Chair Selection Committee: Chairperson, 2017
- Vanderbilt Faculty Research Scholars Selection Committee: Member, 2018

Meharry-Vanderbilt Alliance

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

University of Alabama at Birmingham Comprehensive Cancer Center

- External Advisory Board: Ad-Hoc Member, 2003.
- External Consultant for Bioinformatics, 2003.

American Joint Committee on Cancer (AJCC)

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

Middle Tennessee State University

- 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

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

Northwestern University

- Robert H. Lurie Comprehensive Cancer Center External Advisory Board: Member, 2008 – present.

SRA International Global Health Sector

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

US Food and Drug Administration (FDA)

- Anti-infective Drugs Advisory Committee: Voting member, 2009 – 2014.
- Anti-infective Drugs Advisory Committee: Ad hoc voting member, 2015 – present.

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

- Tenure Track Faculty Selection Committee: Member, 2010 – present.

Shanghai Center for Bioinformatics Technology, Shanghai, China

- Academic Committee Member: Member, 2010 – present.

University of Colorado, Denver

- SPORE in Lung Cancer External Scientific Advisory Board Member, 2010 – present.
- Lung Strategic Partnering to Evaluate Cancer Signatures (SPECS) External Advisory Committee: Member, 2011 – present.

University of Kentucky Markey Cancer Center, Lexington

- Biostatistics Shared Resource Facility External Advisory Board Member, 2010 – present.

American College of Radiology

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

Moffitt Cancer Center

- External Advisory Board: Member, 2014 – 2019.

- Council of Scientific Advisors Ad-Hoc Member, 2010.
- SPORE in Lung Cancer External Scientific Advisory Board Member, 2010 – 2015.

Duke University

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

Arizona University

- Arizona GI SPORE External Advisory Committee: Member, 2011 – 2012.

Dartmouth College

- Institute for Quantitative Biomedical Sciences External Advisory Committee: Member, 2012 – present.

Rutgers Cancer Institute of New Jersey

- Precision Medicine Initiative External Advisory Board: Member, 2013 – present.
- Biometrics Shared Resource External Advisory Board: Member, 2019 - present.

Radiation Therapy Oncology Group, American College of Radiology

- Brain SPORE External Advisory Board: Member, 2013 – present.

City of Hope Cancer Center

- Biostatistics Core External Advisory Board: Member, 2013.

University of California, San Diego

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

Mount Sinai School of Medicine

- Tisch Cancer Institute External Advisory Board (EAB): Member, 2013 – present.
- Myeloproliferative Neoplasms – Research Consortium (MPN – RC) External Advisory Board (EAB): Member, 2019 – present.

United States-Latin America Cancer Research Network

- Data Monitoring Committee (DMC) in the Molecular Profiling of Breast Cancer Study, 2013 – present.

MD Anderson Cancer Center

- External Advisory Board (EAB) (Scientist Panel) of the R. Lee Clark Fellows Award, 2014 – present.

Indiana University

- Center for Computational Biology and Bioinformatics (CCBB) External Advisory Board, 2014 – present.
- Genome Privacy Workshop: Advisory Committee Member, 2015 – present.

Baylor College of Medicine

- Dan L. Duncan Cancer Center External Advisory Committee, 2014 – present.

Peking University, China

- PKU Biobank Advisory Board: Member, 2104 – present.

University of Texas Southwestern Medical Center

- Kidney SPORE External Advisory Board: Member, 2015 – present.
- Lung SPORE Biostatistics Core External Reviewer, 2017 – present

Oregon Health and Science University: Knight Cancer Institute

- Cancer Biostatistic Advisory Committee: Member, 2015 – present
- OHSU Knight Cancer Institute EAB Committee: Member, 2019 – present

American Association for Cancer Research (AACR) Annual Meeting

- Clinical Trials Committee, Member, 2017 – present
- 2018 Program Committee, Co-Chair, 2017 – present
- Career Development Committee, Member, 2017 – present
- Education Committee, Member, 2017 – 2018
- Education Committee, Chairperson, 2018 - Present
- 2018 Annual Meeting, Co-Chairperson
- 2018 Major Symposium: Integrative Data Science for the Precision Medicine Era, Chairperson
- 2018 Educational Session: Common Statistical Errors and Mistakes in Cancer Research: How to Avoid Them, Chairperson and Speaker

Yale School of Medicine: Yale Cancer Center

- DNA Damage Repair SPORE External Advisory Board: Member, 2017 – present

Alliance for Clinical Trials in Oncology

- Alliance Statistics and Data Center (SDC) External Reviewer, 2017 – present

James Cancer Center and Moffit Cancer Center

- Lung SPORE External Advisory Board: Member, 2017 – present

National Cancer Institute

- Special Emphasis Panel: Chairperson, 2018

International Workshop on Cancer Systems Biology

- Steering Committee Member, 2017

LEADERSHIP DEVELOPMENT

- Vanderbilt University School of Medicine Academic Leadership Program, 2007.

CONSULTING

- Vanderbilt University Medical Center — provided consulting services to over 1,000 clients and have reviewed over 2,000 clinical protocols, 1994 – present.

CURRENT RESEARCH AT VANDERBILT

U01 CA163056 (Shyr) 09/01/11-02/28/22
NCI Role: Principal Investigator
Barrett's Esophagus Translational Research Network Coordinating Center (BETRNetCC)
The major goals of this project are to coordinate the functioning of the BETRNet; to facilitate data collection, management, analysis, and dissemination across the BETRNet; to develop a multi-institutional patient registry/virtual biorepository; and to develop and apply evaluation metrics for the BETRNet.

U54 CA217450 (Vanderbilt PI: Shyr) 06/01/17-02/28/22
NCI Role: Principal Investigator
Phenotype Heterogeneity and Dynamics in SCLC
Distinct SCLC phenotypes make up SCLC tumors and collaborate to promote tumor growth. This U54 will focus on understanding on understanding how cell-cell interactions promote development, growth and survival of small cell lung cancer (SCLC) cells.

U24 CA213274 (Vanderbilt PI: Shyr) 12/01/16-11/30/21
NIH Role: Principal Investigator
Small Cell Lung Cancer Consortium Coordinating Center
The goal of this project is to provide database development, data management, and statistical support through the Vanderbilt Center for Quantitative Sciences for the Small Cell Lung Cancer Consortium Coordinating Center.

P01 HL108800 (Hemnes) 07/01/18-06/30/22
NHLBI Role: Co-Investigator
Hormonal, Metabolic, and Signaling Interactions in PAH
This project will test the hypotheses that estrogen antagonism with tamoxifen is safe and will reduce oxidant stress in humans with PAH and that interventions to improve insulin resistance will improve exercise capacity and functional class in PAH.

UM1 CA186689 (Vanderbilt PI: Berlin) 10/01/14-02/29/20
NCI/Primary: Yale University Role: Co-Investigator
ViKTriY Early Clinical Trials Consortium
The ultimate purpose of this project is 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 CA095103 (Coffey, Jr.) 05/01/16-06/30/19

NIH/NCI Role: Core leader
SPORE in GI Cancer - Bridge Funding
The four projects of this study continue to focus on transforming how we diagnose and treat indidivuals with colorectal cancer and deepening our understanding of the pathobiology of colorectal neoplasia.

P50 CA098131 (Mayer/Pietenpol) 09/01/17-08/31/19
NCI Role: Co-Investigator
Discovery of Targetable Mechanisms of Endocrine
Our overall goal continues to be to conduct multidisciplinary, mechanism-based, translational research of the highest possible impact that will contribute meaningfully to measurable progress in breast cancer.

P30 CA068485 (Pietenpol) 09/10/10-08/31/20
NCI Role: Core leader
Cancer Center Support Grant
This grant provides the infrastructure support to facilitate basic, clinical and population-based research relevant to our mission to alleviate cancer death and suffering.

R01 HL124935 (Knollmann) 06/01/15-03/31/20
NIH Role: Co-Investigator
Toward a Mechanism-Based Approach to Treating Atrial Fibrillation
The major goal of this study is to invetigatre the molecular mechanisms responsbile for atrial fibrillation, the most common form of chronic arrhythmia in the United States.

R01 CA200999 (Yang) 04/30/16-11/30/19
NCI Role: Co-Investigator
Sex Hormones, Phytoestrogens and Lung Cancer in Female Nonsmokers
The major goal of this project is 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.

R01 HL133127 (Murray) 04/01/17-03/31/22
NHLBI Role: Co-Investigator
Novel Pathophysiological Targets in Atrial Fibrillation Susceptibility
The major goal of this study is to determine whether or not AF can fundamentally represent Alzheimer's disease of the atrium.

UL1 TR002243 (Bernard) 06/01/17-05/31/22
NIH Role: Co-Investigator
Vanderbilt Institute for Clinical and Translational Research (VICTR)
The major goal of this project is to raise the quality and scientific rigor of the research conducted at Vanderbilt and Meharry Medical College.

U54 CA163072 (Moses) 09/01/11-08/31/21
NCI Role: Co-Investigator
MMC, VICC & TSU: Partners in Eliminating Cancer Disparities
The major goal of this study is to create a comprehensive cancer research partnership between Meharry Medical Center (MMC) and Vanderbilt-Ingram Cancer Center (VICC).

P01 HL129941 (Harrison) 08/01/16-07/31/21
NHLBI Role: Co-Investigator
The Role of Inflammation in Cardiovascular Disease
The overall goal of this Program Project Grant is to understand how immune cells including macrophages, dendritic cells (DCs) and T cells are activated and contribute to cardiovascular diseases including atherosclerosis and hypertension.

R35 HL140016 (Harrison) 08/01/16-07/31/21
NHLBI Role: Co-Investigator
Mechanisms of Immune Activation in Hypertension

This proposal is based on data from highly integrative studies employing complementary methods and animal models and humans, much of which has been published in prestigious journals, has withstood the highest degree of editorial scrutiny and has been internally consistent within our laboratory.

U2C CA233291 (Coffey, Jr.) 09/01/18-08/31/22
NCI Role: Co-Investigator
Integrative Single-Cell Atlas of Host and Microenvironment in Colorectal Neoplastic Transformation
The main goal of the Data Analysis Unit is to provide state-of-the art bioinformatics and biostatistics tools/methods for the construction of a dynamic and multidimensional atlas of colorectal pre-cancer lesions at single-cell resolution.

PAST RESEARCH AT VANDERBILT

P50 CA098131 (Arteaga) 09/11/08-08/31/19
NCI Role: Core leader
SPORE in Breast Cancer
The overall goal of this project is to conduct multidisciplinary, mechanism-based, translational research of the highest possible impact that will contribute meaningfully to measurable progress in breast cancer.

R01 NS0940941 (DeBaun) 08/01/15 – 07/31/20
NIH/NCI Role: Co-Investigator
Primary Prevention of Stroke in Children with SCA in Sub-Saharan African II
The major goal of this project is to determine if moderate dose hydroxyurea when compared to low dose hydroxyurea can successfully prevent strokes in high risk children with SCA living in Nigeria and Ghana.

P01 HL116263 (Linton) 06/01/14-04/30/19
NHLBI Role: Co-Investigator
HDL Function in Human Disease
The major goal of this project is to define the mechanisms for HDL dysfunction in three distinct diseases associated with increased risk for atherosclerotic cardiovascular disease.

U01 CA196405 (Massion) 09/24/15 – 08/31/20
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 ntegrating quantitative imaging, molecular and cellular determinants to offer a paradigm-shift in the clinical management of patients with early ADC.

R01 CA034590 (Richmond) 07/01/13-06/30/18
NCI Role: Co-Investigator
Chemokine Signals in the Pre-Metastatic Niche Inhibit Metastasis
The major goal of this project is 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.

UM1 CA173640 (Shu) 09/18/13-08/31/18
NCI Role: Co-Investigator
Shanghai Men's Health Study
The major goal of this project is to conduct a long-term epidemiological study of cancer and other chronic diseases, with a focus on identifying modifiable protective dietary factors for cancers. The SMHS, with its large sample size, wealth of resources, and unique exposure patterns and disease spectrum, provides exceptional opportunities to address many significant hypotheses that cannot be adequately investigated in any other existing cohort study.

AHA 14 SFRN 20420046 (Harrison) 07/01/14 – 06/30/18
American Heart Association Role: Co-Investigator
Vanderbilt University Strategically Focused Prevention Research Center

The major goal of this project is to establish a prevention research center to expand and extend efforts to goal to reduce coronary heart disease (CHD), stroke and risk.

U01 CA202979 (Blot) 07/21/16-03/31/17
NCI Role: Co-Investigator
Southern Community Cohort Study
Southern Community Cohort Study, a long-term prospective epidemiologic study tracking cancer incidence among approximately 86,000 adults age 40-79, two-thirds African American. Nested case-control studies will utilize 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) 08/01/13-07/31/16
NCI Role: Co-Investigator
The Role of miRNA Network in Gastric Cancer
The goal of this project is 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.

R21 NS080639 (DeBaun) 09/30/12 – 08/31/14
NINDS Role: Co-Investigator
Primary Prevention of Strokes in Nigerian Children with Sickle Cell Disease
The goal of this project is 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) 08/01/12-07/31/14
National Lung Cancer Partnership Role: Principal Investigator
Lung Cancer Mutation Consortium Protocol
The major goal of this project is to develop and implement a customized clinical relational database for use by the Lung Cancer Mutation Consortium.

R01 CA102162 (Moses) 12/01/11 – 11/30/13
NCI Role: Co-Investigator
TGF-Beta in Mammary Development and Tumorigenesis
The major goal of this study is to characterize Cre expression pattern, recombination, and phenotype in various TGF-beta recombinant mouse backgrounds.

P50 CA128323 (Gore) 09/22/08 – 08/31/13
NCI Role: Core leader
Vanderbilt in vivo Cellular and Molecular Imaging Center
The major goal of this project is to establish a new *in vivo* cellular and molecular imaging center at Vanderbilt University, which will be dedicated to highly innovative molecular imaging studies of cancer biology.

P50 CA090949 (Carbone) 09/26/07 – 03/31/12
NIH/NCI Role: Core leader
SPORE in Lung Cancer
The major goal of this project is to investigate the molecular features of tumors or tumor-host interactions that determine their clinical behavior and represent potential molecular targets for interventions.

RC2 CA14839 (Pao: Colorado) 09/01/09 – 08/31/13
NIH
Lung Cancer Mutation Consortium Trial Role: Core leader
The major goal of this project is 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.

U54 CA091405 (Moses) 09/25/06 – 07/31/12
NIH/NCI Role: Co-Investigator
MMC and VICC: Partners in Eliminating Cancer Disparities

A comprehensive cancer research partnership between MMC and VICC.

2R01 CA085492 (Moses) 03/01/11 – 02/29/16
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.

P01 CA116087 (Peek) 01/01/09 – 12/31/13
NCI Role: Co-Investigator
H. pylori-indn and Gastric Cancer
The major goal of this project is to delineate the molecular signaling events initiated by *H. pylori*-epithelial cell contact that regulate phenotypes related to gastric carcinogenesis.

U54 CA126505 (Matrisian) 09/25/06 – 08/31/11
NIH/NCI Role: Co-Investigator
Paracrine TGF-Beta Signaling in Tumor Initiation and Progression
The major goal of this project is 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.

R01 DK058587 (Peek) 09/01/07 – 06/30/11
NIDDKD Role: Core leader
H. pylori and Gastrointestinal Biology
The major goal of this project is to investigate effects of *H. pylori* on prostaglandin biology using conditionally immortalized gastric cells.

R01 CA085492 (Moses) 12/15/05 – 11/30/10
NCI Role: Co-Investigator
TGF-Beta Suppression and Promotion of Mammary Carcinomas
The specific aim for this gran is to determine the effects of systemic inhibition of TGF-(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) 09/30/05 – 05/31/10
NCI Role: Co-Investigator
Molecular Signatures of Lung Cancer
This team proposes to evaluate the potential clinical usefulness of several molecular signatures already developed using a variety of molecular analysis technologies, including DNA, RNA and protein-based technologies addressing both diagnostic and predictive signatures. Important markers in proteomic profiles will be identified, and together with genomic and cDNA markers, clinically feasible assays will be developed and their robustness tested in prospective studies.

P50 GM015431 (Morrow) 07/03/06 – 06/30/11
NIGMS Role: Co-Investigator
Research Center for Pharmacology and Drug Toxicology
The focus of the Center is research related to eicosanoid biology and pharmacology

R21 CA099269 (Berlin) 09/18/03 – 08/31/05
NCI Role: Co-Investigator
PS-341 in Hepatocellular Carcinoma: A Phase II Trial
Specific aims for this study are 1) Evaluate the antitumor effect of PS-341 in hepatocellular carcinoma patients, 2) Evaluate the effect of PS-341 on 26S proteasome activity in peripheral white blood cells (WBC's) and patient serum. Direct measurement of 26S proteasome activity as well as proteins affected by proteasome 26S and NF-kB will be analyzed, and 3) Evaluate the effect of PS-341 on intratumoral NF-kB activation, on tumor apoptosis and 26S proteasome activity.

R01 DK73902 (Peek) 04/01/06 – 12/31/10
NIDDKD Role: Co-Investigator
Mechanisms that Regulate Helicobacter Pylori-Induced Beta-Catenin Activation

The overarching objective of this program project is delineation of the molecular signaling events initiated by H. pylori:epithelial cell contact that regulate phenotypes related to gastric carcinogenesis.

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

P50 CA098131 (Moses) 09/25/06 – 07/31/11
NCI Role: Co-Investigator
HER (erbB) Inhibitors in Untreated Operable Breast Cancer (SPORE in Breast Cancer Supplement)
This supplement provides 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. The current trial targets 100 patients treated over the next 2 years with 1-2 weeks of the EGF receptor inhibitor erlotinib (OSI-774, 'Tarceva') in patients with operable breast cancer.

R01 CA080195 (Arteaga) 04/01/05 – 03/31/11
NCI Role: Co-Investigator
Erbb2-targeted anti-tumor strategies in breast cancer
The major goal of this project is to identify mechanisms of resistance to anti-HER2 drugs, contributing to the eventual elimination of HER2+ breast cancer.

R01 CA129961 (Moses) 04/01/08 – 03/31/12
NCI Role: Co-Investigator
Evaluation of MRI Biomarkers of Breast Cancer Response
The proposed research will combine several new imaging methods to obtain quantitative information on how breast tumors respond to treatment. We hypothesize that this will let us distinguish responders from non-responders early in the course of treatment.

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 statistical methods in modern molecular biology: genomics and proteomics research.

BOOKS/BOOK CHAPTERS/BOOK REVIEWS

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