BIOGRAPHICAL SKETCH

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NAME	POSITION TITLE
Hyslop, Terry	Professor
eRA COMMONS USER NAME	
tmh102	

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
Drexel University, Philadelphia, PA	B.S.	1981	Mathematics
Temple University, Philadelphia, PA	Ph.D.	2001	Statistics

A. Personal Statement

I am the Director of Biostatistics for the Duke Cancer Institute, and Professor in the Department of Biostatistics and Bioinformatics at Duke. I have had more than 15 years of experience in cancer research, with a focus on estimation of and modeling of biomarkers, including mRNA, microRNAs and in situ tumor protein levels. I have had NCI funding to support statistical investigations of quantification of biomarkers from q-RT-PCR. My current research focuses on sophisticated approaches to models of prognosis that utilize multiple biomarkers. I serve as the study biostatistician on several major collaborative cancer grants. I am the lead statistician for a Komen Promise grant on breast cancer (quantitative in situ protein marker profiling and outcome, clinical trial). I am also the PI of a Komen IIR grant, focusing on novel modeling approaches to breast cancer disparities. I have trained 10 MS and pre-PhD students over the last 5 years, 9 of which focused on disparities efforts. As PI, I will lead the efforts to recuit and select students for this program, mentor students, coordinate training and mentors, and align cancer and computational investigators for the program.

B. Positions and Honors.

Positions and Employment

1991 - 2001 Promotion to Principal Biostatistician, Thomas Jefferson University, Department of Medicine, Philadelphia, PA
2001 - 2005 Assistant Professor, Thomas Jefferson University, Division of Biostatistics, Department of Pharmacology and Experimental Therapeutics
2003 - 2006 Assistant Director of Biostatistics Core, Thomas Jefferson University, Kimmel Cancer Center
2005-2013 Associate Professor, Thomas Jefferson University, Division of Biostatistics, Department of Pharmacology and Experimental Therapeutics
2006-2013 Director of Biostatistics Core, Thomas Jefferson University, Kimmel Cancer Center
2006-2013 Director, Division of Biostatistics, Thomas Jefferson University
2014-present Professor, Department of Biostatistics and Bioinformatics, Duke University
Director of Biostatistics, Duke Cancer Institute

Other Professional Experience

Reviewer, NCI Scientific Study Section (PARs-03-098, 099, SEP)	2003
Reviewer, NCI Scientific Study Section (PARs-01-104, 105, 106, 107)	2003-2006
Reviewer, NCI Parent Committee, Cancer Centers, Initial Review Group, ad-hoc	2007-2009
Reviewer, NCI SPORE (Specialized Programs of Research Excellence)	2007-present
applications in Breast, Gynecologic, Genitourinary, and Prostate Cancers	2007-present
Reviewer, NCI P01 Molecular Studies	2009-present
Reviewer, NCI Clinical Oncology (CONC)	2008-2009
Member, ASCO Scientific Program Committee	2009-present
Permanent Member, NCI, Subcommittee A, Cancer Centers	2009-2012
Reviewer, NCI Parent Committee, Cancer Centers, Initial Review Group, ad-hoc	2013-present
Statistical Adviser, Nature Publishing Group	2013-present
External Advisory Board, City of Hope Comprehensive Cancer Center	2014-present

C. Selected peer-reviewed publications (in chronological order).

(Publications selected from >125 peer-reviewed publications)

1. Heron DE, Komarnicky-Kocher LT, **Hyslop T**, Schwartz GF, Mansfield CM. Bilateral breast cancer - Risk

factors and outcomes in synchronous and metrachronous patients. *Cancer*, 2000; 88 (12):2739-50.
2. Calin GA, Sevignani C, Dumitru CD, **Hyslop T**, Noch E, Yendamuri S, Shimizu M, Rattan S, Bullrich F, Negrini M, Croce CM. Human microRNA genes are frequently located at fragile sites and genomic regions involved in cancers, *Proceedings National Academy Sciences*, 2004; 101(9):2999-3004.
3. Cornfield DB, Palazzo JP, Schwartz GF, Goonewardene SA, Kovatich AJ, Chervoneva I, **Hyslop T**, Schwarting R. The prognostic significance of multiple morphologic features and biologic markers in ductal carcinoma in situ of the breast. A study of a large cohort of patients treated with surgery alone, *Cancer*, 2004; 100(11): 2317-2327.
4. Chervoneva I, Iglewicz B, **Hyslop T**. A general approach for two-stage analysis of multi-level clustered non-Gaussian data, *Biometrics*, 2006; 62, 752-759.
5. Sevignani C, Calin GA, Nnadi SC, Shimizu M, Davaluri RV, **Hyslop T**, Demant P, Croce CM, Siracusa L. MicroRNA genes are frequently located near mouse cancer susceptibility loci, *PNAS*, 2007;104(19):8017-8022.
6. Calin G, Liu C-G, Ferracin M, **Hyslop T**, Spizzo R, Sevignani C, Fabbri M, Cimmino A, Lee EJ, Wojcik SE, Shimizu M, Tilli E, Rossi S, Taccioli C, Pichiorri F, Liu X, Zupo S, Herlea V, Gramantieri L, Lanza G, Alder H, Rassenti L, Volina S, Schmittgen TD, Kipps TJ, Negrini M, Croce CM. Ultraconserved Regions Encoding ncRNAs are Altered in Human Leukemias and Carcinomas. *Cancer Cell* ,12, Issue 3, 215-229.
7. Chervoneva I, Li Y, Waldman SA, **Hyslop T**. Relative quantification based on logistic models for individual polymerase chain reactions, *Statistics in Medicine*, 2007; 26(30):5596-611.
8. Waldman SA, **Hyslop T**, Schulz S, Barkun A, Nielsen K, Haaf J, Bonaccorso C, Li Y, Weinberg DS. Association of GUCY2C Expression in Lymph Nodes and Time to Recurrence and Disease-Free Survival in pN0 Colorectal Cancer, JAMA, 2009; 301(7):745-752. PMID: 17473304, NIHMSID 137712
9. Liu M, Casimiro MC, Wang C, Shirley LA, Jiao X, Katiyar S, Ju X, Li Z, Yu Z, Zhou J, Johnson M, Fortina P, **Hyslop T**, Windle JJ, Pestell RG. p21CIP1 attenuates Ras- and c-Myc-dependent breast tumor epithelial mesenchymal transition and cancer stem cell-like gene expression in vivo. Proc Natl Acad Sci U S A. 2009 Nov 10;106(45):19035-9.
10. Sato T, Neilson LM, Peck AR, Liu C, Tran TH, Witkiewicz A, **Hyslop T**, Nevalainen MT, Sauter G, and Rui H. Signal transducer and activator of transcription-3 and breast cancer prognosis. American Journal of Cancer Research 1:347-355, 2011.
11. Peck AR, Witkiewicz AK, Liu C, Stringer GA, Klimowicz AC, Pequignot E, Freydin B, Tran TH, Yang N, Rosenberg AL, Hooke JA, Kovatich AJ, Nevalainen MT, Shriver CD, **Hyslop T**, Sauter G, Rimm DL, Magliocco AM, Rui H. Loss of Nuclear Localized and Tyrosine Phosphorylated Stat5 in Breast Cancer Predicts Poor Clinical Outcome and Increased Risk of Anti-Estrogen Therapy Failure. J Clin Oncol, 18, 2448-53, 2011. *Subject of Editorial*: Tweardy D, Chang JC. Stat5: from breast development to cancer prognosis, prediction, and progression. J Clin Oncol. 29, 2443-4, 2011.
12. Peck AR, Witkiewicz AK, Liu C, Klimowicz AC, Stringer GA, Pequignot E, Freydin B, Yang N, Ertel A, Tran TH, Girondo MA, Rosenberg AL, Hooke JA, Kovatich AJ, Shriver CD, Rimm DL, Magliocco AM, **Hyslop T** and Rui H. Low levels of Stat5a protein in breast cancer are associated with tumor progression and unfavorable clinical outcomes. Breast Cancer Research, 14:R130, 2012 (16 pages).
13. Sato T, Tran TH, Peck AR, Girondo MA, Liu C, Goodman CR, Neilson LM, Freydin B, Chervoneva I, **Hyslop T**, Kovatich AJ, Hooke JA, Shriver CD, Fuchs SY and Rui H. Prolactin suppresses a progestin-induced CK5-positive cell population in luminal breast cancer through inhibition of progestin-driven BCL6 expression, Oncogene, in press, 2013.
14. Yang N, Liu C, Peck AR, Girondo MA, Yanac AF, Tran TH, Utama FE, Tanaka T, Freydin B, Chervoneva I, **Hyslop T**, Kovatich AJ, Hooke JA, Shriver CD, and Rui H. Prolactin-Stat5 signaling in breast cancer is potently disrupted by acidosis within the tumor microenvironment. Breast Cancer Research, 2013, 15:R73.
15. **Hyslop T**, Michael Y, Avery T, Rui H. Population and target considerations for triple-negative breast cancer clinical trials. Biomarkers in medicine. 2013;7(1):11-21.

D. Research Support:

Ongoing Research Support

KG1107102 (**Hyslop**) 8/5/14 – 7/31/15
Susan G. Komen
Structural Models of Breast Cancer Outcomes Disparities

The major goal of this project is to develop a theoretical structural model of breast cancer disparity including endogenous and exogenous variables that inform the impact of race on breast cancer outcomes in at-risk populations.
Role: PI

(**Rui**) 1/8/10 – 1/7/15
Thomas Jefferson University/Susan G. Komen Foundation
Therapy-relevant stratification of breast cancer patients: Integrating pathology & biomarker analyses
The major goals of this project are to enhance therapy-relevant classification of human breast cancer based on analyses of levels of drug target proteins in a large number of breast cancer cases. Improved classification of breast cancer based on levels and activation status of drug-related target proteins within cancer cells will facilitate better prediction of which patients are most likely to benefit from existing or new drugs, alone or in combination.
Role: Consortium PI

5P30-CA014236-40 (**Kastan**) 1/1/10 – 12/31/14
NIH
Comprehensive Cancer Center Core Support Grant: Biostatistics Core
The major goals of this project are to provide biostatistical collaboration on design and analysis of scientific studies as well as scientific computing resources to the Duke Comprehensive Cancer Center.
Role: Core Director

080-27000-F97801 (**Wang**) 4/1/14 – 12/31/16
Thomas Jefferson University/American Cancer Society
Small RNA Sequencing and prospective evaluation of HCC risk in HBV patients
The goal of this project is to identify the potential roles of hepatitis D virus DNA, targeted mircoRNAs and alphafetoprotein in the prognosis of HBV patients converting to HCC.
Role: Consortium PI

Former Research Support
(**Waldman**) 6/1/10 – 5/31/14
PA Department of Health
Therapeutic vaccine bridging the gap in racial disparities in colorectal cancer
The major goal of this project defines the utility of guanylyl cyclase C as a novel vaccine target to prevent disease recurrence in colorectal cancer.
Role: Co-Investigator

(**Rui**) 8/8/11 – 7/31/16
NIH/NCI (Sub w/ UPenn)
Ligand-independent degradation of interferon receptor in malignant melanoma
The major goal of this project is to identify paracrine factors secreted by melanoma cells that down-regulate interferon receptors in autocrine and paracrine manner and independent of the interferon ligand. The work has implications for interferon resistance and sensitivity of melanoma.
Role: Co-Investigator

(**Pestell**) 6/1/13 - 5/31/18
NIH/NCI
Translational Research in Cancer
The major goal of this project is to provide funding to support the cancer research activities of the Kimmel Cancer Center (KCC).
Role: Biostatistics Core Director

VA244-P-1763 (**Keith**) 6/3/11 – 6/2/14
Department of Veteran Affairs
Multi-Center Double Blind Placebo Controlled Study of Ethosuximide in the Prevention of Episodic Migraine Comparing Number of Migraine Headache Days/4 Weeks at End of Study with Baseline

The main goal of this project is to evaluate the safety of Ethosuximide and its efficacy for reducing the frequency of episodic migraines in migraine sufferers.
Role: Biostatistician