BIOGRAPHICAL SKETCH

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NAME: Leach, Robin J., Ph.D.

eRA COMMONS USER NAME (credential, e.g., agency login): RLeach

POSITION TITLE: Professor, Department of Cell Systems and Anatomy

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	Completion Date MM/YYYY	FIELD OF STUDY
Point Loma College, San Diego, CA	B.A.	06/1978	Biology & Mathematics
University of Utah, Salt Lake City, UT	Ph.D.	02/1984	Biology
University of Southern California, Los Angeles	Post-Doc	07/1989	Genetics

A. Personal Statement

My research career has focused on the genetics of complex diseases and for the past 20 years have focused on genetics and biomarkers associated with prostate cancer. I have an active research laboratory, and managed the Office of Education for the Mays Cancer Center. I am very involved in graduate education. I have served as the director or co-director of the genetics graduate training programs for over 13 years. I was the principal investigator on a P20 grant from the NCI designed to provide research opportunities to quantitative scientist in cancer biology with an emphasis on health disparity. I am also funded by the Department of Defense to manage a summer research program for minority students from a Historically Black University to perform prostate cancer research. Furthermore, I managed the CURE program for our cancer center, which serves underrepresented students interested in biomedical research. I oversee the Cancer Research Career Enhance Core for the Mays Cancer Center in addition to serving as the Associate Director for Education and chairing the cancer center's Education Committee. I have trained 12 Ph.D. students and 7 master's students, some of whom were minorities, and have served on more than 50 dissertation/thesis committees. I am the recipient of numerous teaching awards, most recent the Regent Outstanding Teaching Award from the UT System and the Piper Professor for the Minnie Stevens Piper Foundation. I am the PI for the American Cancer Society Institutional Grant which started in 2022 and was given a supplement to support 8 undergraduate students from local Hispanic Serving Institutions for two summers (2023, 2024).

B. Positions, Scientific Appointments, and Honors

Positions and Employment

2019-present	Director of the Mays Cancer Center Biorepository, UT Health SA
2017-present	Associate Director for Education, Mays Cancer Center, UT Health SA
2015-2016	Director of Scientific Development, Mays Cancer Center, UT Health SA
2009-2020	Chief, Division of Research, and Professor Department of Urology, UT Health SA
2006-2009	Director of Research and Professor, Department of Urology, UT Health SA, San Antonio, TX
2000-present	Director, Biospecimen and Genomic Analysis Core, UT Health SA, San Antonio, TX
2000-present	Professor, Departments of Cell Systems and Anatomy and Pediatrics, UT Health SA, San Antonio, TX
1995-2000	Associate Professor, Department of Cell Systems & Anatomy and Pediatrics, UT Health SA, San Antonio, TX
1989-1995	Assistant Professor, Departments of Cell Systems & Anatomy and Pediatrics, UT Health SA, (Formerly University of Texas Health Science Center at San Antonio), San Antonio, TX

1988-1989 Postdoctoral Fellow, University of Southern California, Kenneth Norris, Jr., Comprehensive Cancer Center, Peter A. Jones, Advisor
1984-1987 Postdoctoral Fellow, University of Southern California, Kenneth Norris, Jr., Comprehensive Cancer Center, R.E.K. Fournier, Advisor
1978-1984 Graduate Student, Department of Biology, University of Utah, Raymond L. White, Advisor

Other Experience and Professional Memberships

2022 Ad Hoc Member, NIH Cancer, Heart, Sleep Epidemiology Panel B Study Section Meeting
2021 Member, DOD PCRP Study Section, October
2021 Member, NIMHD ZMDI DRI, April
2021 Member, NIMHD ZMDI XLN, February
2021 Member, NIH/NCI R03/R21 SEP, July
2021 Chair, DOD Military Health System Research Study Section, July
2021 Member, DOD PCRP Study Section, August
2021 Chair, DOD PRCRP Bladder Cancer Study Section
2020 Member, NIH Loan Repayment Program Review Committees (2)
2020 Member, NIH ZRG1-PSE-B02 Review Panel
2020 Chair, DOD PRCRP Bladder Cancer Study Section
2020 Chair, DOD PCRP Prostate Cancer Study Section
2019 Member, DOD PCRP Translational Science Study Section
2018 Member, NIH ZRG1 OBT-E Study Section – Health Disparities R01 and R21. March
2018 Chair, NIH P20 Study Section for Health Disparity leading to SPOREs, April
2017-2018 Ad Hoc Reviewer, Million Veterans Program for Veteran's Administration
2017 Chair, NIH SBIR contract topic 355: Cell and Animal-Based Models to Advance Cancer Health Disparity Research.
2017 Member, DOD Health Disparity Study Section for Prostate Cancer
2016 Member, DOD PCRP Molecular Biology and Genetics Study Section
2015-2016 Chair and co-chair, NCI Special Emphasis Panel, Health Disparity for P20 and U54
2015 Ad Hoc Reviewer, NIH Cancer Genetic Study Section
2015 Chair, DOD PCRP Cancer Genetic Study Section
2015 Chair, DOD PCRR Horizon Study Section
2013-2014 Chair, Population Science Review Panel, DOD Prostate Cancer Program
2010-2018 Member, American Association for Cancer Researchers
2008-2012 Member, NIH Cancer Genetic Study Section
2008-2012 Chair, Concept-Molecular Biology & Genetics Panel 2 for DOD Breast Cancer Program
2005-2011 Chair, Peer Review Panel for the Canary Fund Fellowship Program of the American Cancer Society
2005-2008 Member, National Cancer Institute Review Panel "I"
1996-present Member, Human Genome Organization (HUGO)

Honors

2021-present Holder, Kathy and David Ashwin Endowment for Medical Research
2019-present Founding Member of Academy of Educational Scholars, UT Health Long School of Medicine
2017 Named Piper Professor, Minnie Stevens Piper Foundation
2016 UT Regents Outstanding Teaching Award (ROTA)
2010-2020 The Stanley and Sandra Rosenberg Endowment in Urologic Research
2010 Distinguished Teaching Professor, University of Texas System
2008 Elected Master Teacher, UT Health SA
2001 The Dean's Award for Exceptional Graduate Teaching, UT Health SA
1998 Presidential Award for Teaching Excellence, UT Health SA
1997 John G. Haddad, Jr., Research Award from the Paget Foundation

C. Contributions to Science

1. My early work focused on developing genetic maps of the human chromosome. I was Dr. Raymond White's first graduate student and worked with him soon after his arrival at the University of Utah. He had

just published two papers describing how to use restriction fragment length polymorphisms to develop maps of human chromosomes but had yet to publish a map of any human chromosomes. His laboratory, at the time, was gathering large Utah kinships (part of the CEPH families) and was focused on identify DNA based markers. I was involved in identify DNA markers for human chromosomes 6 and 13. I continued to work on the genome project when I moved to UTHSA, where we had an NIH-funded genome center for chromosomes 2 and 3.

a. Cavenee W, **Leach R**, Mohandas T, Pearson P, White R (1984) Isolation and regional localization of DNA segments revealing polymorphism loci from chromosome 13. Am J Hum Genet. 36:10-24. PMCID: PMC1684373.
b. **Leach R**, DeMars R, Hasstedt S, White R (1986) Construction of a map of the short arm of human chromosome 6. Proc Natl Acad Sci USA. 83:3909-3913. PMCID: PMC323634
c. **Leach RJ**, Chinn R, Reus BE, Hayes S, Schantz L, Dubois B, Overhauser J, Babbabio A, Drabkin H, Lewis TB, Mengden G, Naylor SL (1994) Regional localization of 188 sequence tagged sites on a somatic cell hybrid mapping panel for human chromosome 3. Genomics 24:549-56. PMID: 7713507

2. The markers and related resources that I helped develop became important in the identification of single gene defects. I collaborated with Dr. Raymond White's group while a postdoctoral fellow at the University of Southern California and later in my first faculty position at UTHSA. I worked with Drs. Ray White and Francis Collins on identifying the neurofibromatosis type 1 gene. I worked with Dr. Mark Leppert at the University of Utah on other genetics projects. The most significant of these involved identifying the genes for benign neonatal epilepsy (BNE). My laboratory mapped a BNE locus to chromosome 8 and was involved in the identification of two BNE genes.
   a. O'Connell P, **Leach R**, Cawthon RM, Culver M, Stevens J, Viskochil D, Fournier RE, Rich DC, Ledbetter DH, White R (1989) Two NFI translocations map within 600-kilobase segment of 17q11.2. Science. 244:1067-1068. PMID: 2543077
   b. Fountain JW, Wallace MR, Brereton AM, O'Connell P, White RL, Rich DC, Ledbetter DH, **Leach RJ**, Fournier RE, Menon AG, Gusella JF, Barker D, Stephens K, Collins FS. (1989) Physical mapping of the von Recklinghauser neurofibromatosis region on chromosome 17. Am J Hum Genet. 44:58-67. PMCID: PMC1715477
   c. Charlier C, Singh NA, Ryan SG, Lewis TB, Reus BE, **Leach RJ**, Leppert M (1998) A pore mutation in a novel KQT-like potassium channel gene in an idiopathic epilepsy family. Nat Genet. 18:53-55. PMID: 9425900
   d. Singh NA, Charlier C, Stauffer D, Dupont BR, **Leach RJ**, Melis R, Ronen GM, Bjerre I, Quattlebaum T, Murphy JV, McHarg ML, Gagnon D, Rosales TO, Pfeiffer A, Anderson VE, Leppert M (1998) A novel potassium channel gene, KCNQ2, is mutated in an inherited epilepsy of newborns. Nat Genet. 18:25-9. PMID: 9425895

3. Since coming to UTHSA, I have worked with several groups interested in identifying genes for complex diseases. Two of the most productive collaborations were with Dr. Michael Stern's group, who worked on diabetes and related disorders, and Dr. Michael Escamilla's group, who worked on bipolar disorders and schizophrenia. I provided genetic expertise to these groups and provided support for the development of cell lines from their cohorts, which helped in the mapping and identification of genes in their Hispanic populations.
   a. Walss-Bass C, Liu W, Lew DF, Villegas R, Montero P, Dassori A, **Leach RJ**, Almasy L, Escamilla M, Raventos H (2006) A novel missense mutation in the transmembrane domain of neuregulin 1 is associated with schizophrenia. Biol Psychiatry. 15:548-53. PMID: 16730337
   b. Cavarria-Siles I, Walss-Bass C, Quezada P, Dassori A, Contreras S, Medina R, Ramirez M, Armas R, Salazar R, **Leach RJ**, Raventos H, Escamilla MA (2007) TGFB-induced factor (TFIG): a candidate gene for psychosis on chromosome 18p. Mol Psychiatry. 12:1033-41. PMID: 17440433
   c. Arya R, Duggirala R, Almasy L, Rainwater DL, Mahaney MC, Cole S, Dyer TD, Williams K, **Leach RJ**, Hixon JE, MacCleur JW, O'Connell P, Stern MP, Blangero J (2002) Linkage of high-density lipoprotein-cholesterol concentration to a locus on chromosome 9p in Mexican Americans. Nat Genet. 30:102-105. PMID: 11743583
   d. Lehman DM, Hunt KJ, **Leach RJ**, Hamlington J, Arya R, Abboud HE, Duggirala R, Blangero J, Goring HH, Stern MP (2007) Haplotypes of transcription factor 7-like 2 (TCF7L2) gene and its upstream region are associated with type 2 diabetes and age of onset in Mexican Americans.

Diabetes. 56:389-393. PMID:17259383

4. For the past 24 years, my laboratory worked on genetic variants associated with prostate cancer risk. More recently, we have focused on identifying genetic variants associated with prognosis. Our ongoing studies are attempting to identify genomic changes in tumors associated with poor prognosis, evaluating gene expression, copy number variants, and epigenetic alterations.
   a. Torkko KC, van Bokhoven A, Mai P, Beuten J, Balic I, Byers TE, Hokanson JE, Norris JM, Baron AE, Lucia MS, Thompson IM, **Leach RJ** (2008) VDR and SRD5A2 polymorphisms combine to increase risk for prostate cancer in both non-Hispanics White and Hispanic White men. Clin Cancer Res. 15:3223-3229. PMID:18483391
   b. Beuten J, Gelfond JA, Franke JL, Shook S, Johnson-Pais TL, Thompson IM, **Leach RJ** (2010) Single and multivariate association of MSR1, ELAC2 and RNASEL with prostate cancer in an ethnic diverse cohort of men. Cancer Epidemiol Biomarkers Prev. 19:588-99. PMID: 20086112
   c. Ashcraft KA, Johnson-Pais TL, Troyer DA, Hernandez J, **Leach RJ** (2020) A copy number gain on 18q present in primary prostate tumors is associated with metastatic outcome. Urol Oncol. 11: S1078-1439. PMID: 32665124

5. In 2001, we began recruiting men into a prostate cancer screening cohort from the greater San Antonio areas as part of our efforts for the EDRN. The cohort is known as SABOR (San Antonio Biomarkers of Risk for prostate cancer). This cohort is being utilized to performing numerous biomarker validation studies as well as developing risk assessment tools.
   a. Medina EA, Shi X, Grayson MH, Ankerst DP, Livi CB, Medina MV, Thompson IM Jr, **Leach RJ** (2014) The diagnostic value of adiponectin multimers in healthy men undergoing screening for prostate cancer. Cancer Epidemiol Biomarkers Prev. 23:309-315. PMCID: PMC4084930
   b. Ankerst DP, Goros M, Tomlins SA, Patil D, Feng Z, Wei JT, Sanda MG, Gelfond J, Thompson IM, **Leach RJ**, Liss MA (2019) Incorporation of urinary prostate cancer antigen 3 and TMPRSS2:ERG into Prostate Cancer Prevention Trial Risk Calculator. Eur Urol Focus 5:54-61. PMCID: 6077104
   c. Du Z, Hopp H, Ingles SA, Huff C, Sheng X, Weaver B, Stern M, Hoffmann TJ, John EM, Van Den Eeden SK, Strom S, **Leach RJ**, Thompson IM Jr, Witte JS, Conti DV, Haiman CA (2020) A genome-wide association study of prostate cancer in Latinos. Int J Cancer 146:1819-1826. PMCID: 7028127
   d. Otto JJ, Correll VL, Engstroem HA, Hitefield NL, Main BP, Albracht B, Johnson-Pais T, Yang LF, Liss M, Boutros PC, Kislinger T, **Leach RJ**, Semmes OJ, Nyalwidhe JO (2020) Targeted mass spectrometry of a clinically relevant PSA variant from post-DRE urines for quantitation and genotype determination. Proteomics Clin Appl.14: e2000012. PMID: 32614141

Complete List of Published Work in MyBibliography:
http://www.ncbi.nlm.nih.gov/sites/myncbi/robin.leach.1/bibliography/46468935/public/?sort=date&direction=asc ending

Current Research Support

P30CA054174 (Sung) 08/01/2020-07/31/2025 20%/2.4 cm
NIH/NCI $1,414,000
Mays Cancer Center at UTHSA
This cancer center support grant provides research core and program infrastructure support to members of the cancer center for the conduct of their cancer research.

IRG-21-147-01-IRG (Leach) 01/01/2022-12/31/2024 2%/.24 cm
American Cancer Society $204,000
American Cancer Society Institutional Research Grant & Diversity in Cancer Research Internship IRG Supplement from American Cancer Society
To provide pilot support for early-stage investigators involved in cancer research. Supplement to support URM undergraduates involved in cancer research.

No project number (Leach) 06/14/2022-07/31/2027 2%/.24 cm
VCU Massey Cancer Center $14,400

Winn Clinical Investigator Pipeline Program
The Robert A. Winn Clinical Investigator Pipeline Program (Winn CIPP) offers medical students (Winn CIPP students) a service-learning experience that provides them early exposures to community-oriented clinical research in community-based clinical research sites across the United States.

U01 CA224255 (Lin) 09/20/2019-08/31/2024 2%/.24 cm
Fred Hutchinson Cancer Center – NIH/NCI
Prostate cancer **A**ctive **S**urveillance **S**tudy (PASS) Cohort Infrastructure Support for Cancer Research
To provide infrastructure support for the PASS study for both recruitment and long-term follow-up.

RP230420 (Leach) 02/15/2023-02/14/2028 5%/.60 cm
CPRIT (subaward Texas Tech)/PI: Lakshmanaswamy $14,100
Impacting Cancer Outcomes in Hispanics (ICOHN)
We propose to develop a TREC center that leverages TTUHSCEP investments and strengths in cancer research to reduce the community impact of cancer through improved knowledge of biological, cultural, and behavioral determinants of cancer by developing novel biomarkers and therapeutics. We will develop three research cores and a structured mentoring and professional development program collaborating with experts at six other institutions to create a critical mass of successful cancer researchers focused on biological, clinical and translational research to improve Hispanic cancer outcomes.