BIOGRAPHICAL SKETCH

Provide the following information for the key personnel and other significant contributors in the order listed on Form Page 2.
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NAME	POSITION TITLE
Christopher Umbricht	Assistant Professor of Oncology
eRA COMMONS USER NAME (credential, e.g., agency login) cumbric1	

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
Universities of Basel and Geneva	M.D.	1975-1982	Medicine
Johns Hopkins University	Ph.D.	1987-1995	Molecular Biology
Johns Hopkins Oncology Center	Postdoc	1995-1999	Oncology

A. Personal Statement

Dr. Umbricht is Assistant Professor of Surgery, Oncology, and Pathology. His background covers the fields of pathology, medicine, molecular biology, and genetics. His research is focused on refining the therapeutic approach to typically overtreated conditions, such as ductal carcinoma in situ (DCIS) of the breast or in node-negative breast cancer. Dr. Umbricht has developed an integrated clinical-pathological relational database of all breast disease-related data available at The Johns Hopkins Hospital over the last 25 years. With the support of information systems personnel, Dr. Umbricht has extracted and annotated available data pertaining to pathology reports, tissue availability, treatment, follow-up and final outcome information on patients with breast disease seen at this institution since 1985. Dr. Umbricht's laboratory has a longstanding interest in epigenetic cancer predisposition. His role as Co-Investigator in Dr. Glunde's Research Project 3 will be to select suitable cases of invasive ductal carcinoma (IDC) from the clinical-pathological database suited for the studies of Collagen I fibers. Dr. Umbricht will retrieve these samples from the breast pathologist Dr. Edward Gabrielson in the IPB Core and will thereby function as a gatekeeper for performing the proposed blinded study design.

B. Positions and Honors

Most relevant to the current application

1975	Baccalaureate in Classic Languages, Humanistisches Gymnasium, Basel
1983-84	Internship in Pathology, University of Basel, Institute of Pathology
1984-85	Internship in Medicine, University of Basel, St. Claraspital
1985-87	Internship and Residency in Internal Medicine, Johns Hopkins Hospital, Baltimore
1986	License to Practice Medicine, State of Maryland
1988	American Board of Internal Medicine
1989-94	Physician Scientist Award of the National Cancer Institute
1996-99	Susan G. Komen Foundation Training Grant - Telomerase as Marker of Early Breast Cancer
2000	Assistant Professor, Dept. of Surgery, Oncology, and Pathology, Johns Hopkins U. SOM

C. Selected peer-reviewed publications (from 45).

Most relevant to the current application (in chronological order)

1. Umbricht CB, Sherman ME, Dome JS, Carey LA, Marks J, Kim NW, Sukumar S. Telomerase Activity in Ductal Carcinoma In Situ and Invasive Breast Cancer. Oncogene 1999; 18:3407-3414.
2. Umbricht CB, Evron E., Marks J., Gabrielson E., Sukumar S. Hypermethylation of 14.3.3 sigma (Stratifin) and tumor progression in preinvasive breast cancer. Oncogene 2001; 20:3348-3353.
3. Evron E., Umbricht C.B., Korz D., Raman V., Loeb D.M., Niranjan B., Weitzman S.A., Marks J., Sukumar S. Loss of cyclin D2 expression in the majority of breast cancers is associated with promoter hypermethylation. Cancer Res 2001; 61:2782-2787.
4. Evron E., Dooley W. C., Umbricht C. B., Rosenthal D., Sacchi N., Gabrielson E., Soito A. B., Hung D. T., Ljung B., Davidson N. E., Sukumar S. Detection of breast cancer cells in ductal lavage fluid by methylation- specific PCR. Lancet 2001; 357:1335-1336.

5. Mazzanti C, Zeiger M.A, Costourous N, Umbricht C.B, Westra W.H, Smith D, Somervell H, Bevilacqua G, Alexander H.R, Libutti S.K. Using gene expression profiling to differentiate benign vs malignant thyroid tumors. Cancer Res 2004; 64:2898-2903.
6. Rosen J, He M, Umbricht C, Alexander HR, Dackiw AP, Zeiger MA, Libutti SK. A six-gene model for differentiating benign from malignant thyroid tumors on the basis of gene expression. Surgery 2005; 138:1050-1056.
7. Hoque MO, Rosenbaum E, Westra WH, Xing M, Ladenson P, Zeiger MA, Sidransky D, Umbricht CB. Quantitative Assessment of Promoter Methylation Profiles in Thyroid Neoplasms. J Clin Endocrinol Metab 2005; 90:4011-4018.
8. Hu S, Liu D, Tufano RP, Carso KA, Rosenbaum E, Cohen Y, Holt EH, Kiseljak-Vassiliades K, Rhoden KJ, Tolaney S, Condouris S, Tallini G, Westra WH, Umbricht CB, Zeiger MA, Califano JA, Vasko V, Xing M. Association of aberrant methylation of tumor suppressor genes with tumor aggressiveness and BRAF mutation in papillary thyroid cancer. Int J Cancer 2006; 119:2322-9.
9. Prasad NB, Somervell H, Tufano RP, Dackiw APB, Marohn MR, Califano JA, Wang Y, Westra WH, Clark DP, Umbricht CB, Libutti SK, Zeiger MA. Identification of Genes Differentially Expressed in Benign versus Malignant Thyroid Tumors. Clin Ca Res 2008; 14:3327-3337. PMC Journal - In Process.
10. Banks ND, Kowalski J, Tsai HL, Somervell H, Tufano R, Dackiw APB, Marohn MR, Clark DP, Umbricht CB, Zeiger MA. A Diagnostic Predictor Model for Indeterminate or Suspicious Thyroid FNA Samples. Thyroid 2008; 18:933-941. PMC Journal - In Process.
11. Wang Y, Kowalski J, Tsai HJ, Marik R, Prasad N, Somervell H, Lo PK, Sangenario LE, Dyrskjot L, Orntoft TF, Westra WH, Meeker AK, Eshleman JR, Umbricht CB, Zeiger MA. Differentiating Alternative Splice Variant Patterns of Human Telomerase Reverse Transcriptase in Thyroid Neoplasms. Thyroid 2008; 18:1055-1063. PMCID2857449
12. Kowalski J, Talbot T, Tsai HL, Prasad N, Umbricht CB, Zeiger MA. From Ambiguities to Insights in Cancer Diagnosis via Query-based Comparisons. J Pattern Recognition. 2009;42:575-580. Not NIH Funded.
13. Marik R, Fackler M, Gabrielson E, Zeiger MA, Sukumar S, Stearns V, Umbricht CB. DNA methylation-related vitamin D receptor insensitivity in breast cancer. Cancer Biol Ther 2010; 10 (1): 44-53. PMC Journal - In Process.

Book Chapter

Umbricht CB. Ch.2: Invasion. Book chapter in: Kuerer H, ed. Kuerer's Breast Surgical Oncology. New York, NY: McGraw-Hill. 2010.

D. Research Support

Ongoing Research Projects

2P50CA103175 (Bhujwalla) 09/22/11 - 07/31/16
NCI
JHU ICMIC Program
This center grant funds an *in vivo* Cellular and Molecular Imaging Center at Johns Hopkins. The program consists of four research components, four developmental projects, one career development award and four resources.

Komen IIR (Umbricht) 04/01/11 – 03/30/14
Susan G. Komen Breast Cancer Foundation
Molecular Marker Signature Prognostic of Metastatic Disease in Node-negative ER-Negative Breast Cancer with no systemic therapy
The major goal of this project is to determine the molecular determinants of tumor progression in untreated ER-negative breast cancer.

1R01CA140311-01A2 (Umbricht) 07/01/11 – 06/30/16
NIH
Multicenter Genetic, Epigenetic & Expression Analysis of DCIS outcome predictors.
The goal of this project is to determine the molecular determinants of tumor progression in pre-invasive breast cancer.

R01CA131294 (Sharma) 07/01/09 - 06/30/14

NIH
Role of adipocytokines leptin and adiponectin in breast tumorigenesis
The goals of this project include investigating the molecular mechanisms underlying the cross-talk between leptin and adiponectin in breast carcinogenesis.

Avon Foundation 02-2011-117 (Sukumar) 01/01/12 - 12/31/13
Molecular markers for predicting progression to invasive cancer
The goal of this project is to validate a new panel of biomarkers that differentiates between presence of papaloma or cancer in patients with pathologic nipple discharge.

Completed Projects Within the Last Three Years

CA088843-06A1 (Sukumar) 09/01/06-08/31/11
Molecular Markers in Human Breast Cancer
NCI Specialized Program of Research Excellence (SPORE) in breast cancer
The purpose of this study is to develop molecular markers of invasive breast cancer.

American Cancer Society (Umbricht) 01/01/08-12/31/11
Genetic and Epigenetic Analysis of Thyroid Cancer
The purpose of this study is to identify genetic changes responsible for common thyroid cancer subtypes.

R01 CA107247-04 (Zeiger) 05/01/05-04/30/10
NIH
Molecular Classification of Suspicious Thyroid Tumors
The purpose of this study is to develop a gene expression-based molecular classification of thyroid tumors.

Breast Cancer Research Foundation (BCRF) (Stearns) 10/01/08-09/30/10
The purpose of this study is to characterize *in vivo* and *vitro* effects of Vitamin D/A and demethylating agent combinations in breast cancer.

BC030054 Center of Excellence Grant (Sukumar) 09/01/04-08/31/09
Department of Defense
In Molecular Targeting of Breast Cancer Metastasis
The purpose of this study is to determine the molecular alterations in metastatic breast cancer.

Susan G. Komen Foundation (Umbricht) 05/01/05-04/30/08
Value of Molecular Markers in Predicting Long-Term Outcome in Ductal Carcinoma in situ of the Breast.
The purpose of this study is to identify genetic changes responsible for breast cancer progression.