

BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors in the order listed on Form Page 2.
Follow this format for each person. **DO NOT EXCEED FOUR PAGES.**

NAME Pedram Argani	POSITION TITLE Professor, Pathology and Oncology, Johns Hopkins School of Medicine Director, Breast Pathology Program		
eRA COMMONS USER NAME (credential, e.g., agency login) PARGANI1			
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	MM/YY	FIELD OF STUDY
Princeton University, NJ	B.A.	1987	Molecular Biology
University of Pennsylvania, PA	M.D.	1992	Medicine
Hospital of the University of Pennsylvania, PA	Residency	1995	Anatomic Pathology
Memorial Sloan-Kettering Cancer Center, NY	Fellowship	1996	Oncologic Pathology
Memorial Sloan-Kettering Cancer Center, NY	Fellowship	1997	Molecular Pathology

A. Personal Statement

My research interests span several broad areas of surgical pathology. Foremost, as the Director of the Breast Pathology Program at Johns Hopkins, I am currently involved in studies applying knowledge gained from global genetic analysis of breast carcinoma (such as SAGE and Microarray analysis) to well-defined histopathologic precursor lesions. Many of the new tumor suppressor genes identified have proven to be inactivated by methylation. We hope to be able to use these new markers to improve early detection and treatment of breast cancer. Additionally, I am a surgical pathologist who has access to breast cancer specimens of all types, including mastectomy specimens and also normal breast tissue from reduction mammoplasty. As a member of the Department of Pathology, I will be able to guide investigators to use the most relevant pathological analyses in the Molecular Oncology Resource of the JHU ICMIC Program. My role as Co-Investigator in Research Component 4 will be to provide lymph node negative (LN-) and positive (LN+) cases of intraductal carcinoma (IDC) for our study of Collagen I fiber density as a novel imaging biomarker, along with histology data of these patients, such as tumor size, grade, LN status, TNM stage, and ER, PR, Her2 status. I will also provide two mastectomy specimens for testing the endomicroscope.

B. Positions and Honors

Positions and Employment

1997-98	Senior Clinical Fellow in Anatomic Pathology and Staff Pathologist Department of Pathology, The Johns Hopkins Hospital, Baltimore, Maryland
1998-99	Instructor and Staff Pathologist
1999-04	Assistant Professor and Staff Pathologist Department of Pathology, The Johns Hopkins Hospital, Baltimore, Maryland
2000	Harry B. Neustein Award for "New advances in molecular technology that pertain pediatric pathology", Society for Pediatric Pathology Annual Meeting, USCAP 2000
1999-00	Co-Director, National Wilms Tumor Study Pathology Center
2000-03	Director, Immunohistochemistry Laboratory
2000, 01, 03	The Johns Hopkins Pathology House Staff Teaching Award for Anatomic Pathology
2004, 05, 08, 09	Department of Pathology, The Johns Hopkins Hospital, Baltimore, Maryland
2001-present	Director, Breast Pathology Program, Johns Hopkins Hospital
2003-04	Professor's Award for Distinction in Teaching in the Basic and Preclinical Sciences, The Johns Hopkins University School of Medicine
2004-08	Associate Professor, Departments of Pathology and Oncology, The Johns Hopkins University
2005	The Barry Wood Jr. Award for Excellence in Teaching, Johns Hopkins University School of Medicine Class of 2007
2007	Arthur Purdy Stout Prize, Arthur Purdy Stout Society of Surgical Pathologists (awarded annually to a surgical pathologist under the age of 45 whose research publications have had a major impact on diagnostic pathology)

2008-present	Professor, Pathology and Oncology, The Johns Hopkins University
Honors	
1986	Class of 1939 Scholar Award (third year student with the highest academic standing at Princeton University)
1991	American Society of Clinical Pathologists Award for Academic Excellence and Achievement
1992	Alpha Omega Alpha (Elected as third year medical student, University of Pennsylvania, School of Medicine)

C. Selected Peer-reviewed Publications

Most relevant to the current application

1. Fackler MJ, McVeigh M, Evron E, Garrett E, Mehotra J, Polyak N, Sukumar S, Argani P. DNA methylation of RASSF1A, HIN-1, RAR- β , Cyclin D2 and Twist in in situ and invasive lobular carcinoma. *Int J Cancer* 2003;107:970-975.
2. Meeker AK, Hicks JL, Gabrielson E, Strauss WM, De Marzo AM, Argani P. Telomere shortening occurs in subsets of normal breast epithelium as well as in situ and invasive carcinoma. *Am J Pathol* 2004;164:925-935.
3. Bachman KE, Blair BG, Brenner K, Bardelli A, Arena S, Zhou S, Hicks J, De Marzo A, Argani P, Park B. p21WAF1/CIP1 mediates the growth response to TGF- β in human epithelial cells. *Cancer Biology and Therapy* 2004;3:221-5.
4. Fackler MJ, McVeigh M, Mehotra J, Blum MA, Lange J, Lapidés A, Garrett E, Argani P, and Sukumar S. Quantitative multiplex methylation-specific PCR assay for the detection of promoter hypermethylation in multiple genes in breast cancer. *Cancer Res* 2004;64:4442-52.
5. Bachman KE, Argani P, Samuels Y, Silliman N, Ptak J, Szabo S, Konishi H, Karakas B, Blair BG, Lin C, Peters BA, Velculescu VE, Park BH. The PIK3CA gene is mutated with high frequency in human breast cancers. *Cancer Biology and Therapy* 2004;3:772-5.
6. Parker BS, Argani P, Cook BP, Fen HL, Chartrand SD, Zhang M, Saha S, Bardelli A, Yiang Y, St. Martin TB, Nacht M, Teicher BA, Klinger KW, Sukumar S, Madden SL. Alterations to Vascular Gene Expression in Invasive Breast Carcinoma. *Cancer Research* 2004;64:7857-7866.
7. Fenton H, Carlile B, Montgomery EA, Carraway H, Herman J, Sahin F, Su GH, Argani P. LKB1 protein expression in human breast carcinoma. *Appl Immunohistochem Mol Morphol* 2006;14:146-153.
8. Cao D, Lin C, Woo S, Vang R, Tsangaris T, Argani P. Separate cavity margin sampling at the time of initial lumpectomy significantly reduces the need for re-excisions. *Am J Surg Pathol* 2005; 29:1625-1632.
9. Wu J, Fackler MJ, Halushka MK, Molavi DW, Taylor ME, Tao WW, Griffin C, Fetting J, Davidson NE, De Marzo AM, Hicks JL, Chitale D, Ladanyi M, Sukumar S, Argani P. Heterogeneity of Breast Cancer Metastasis: Comparison of Therapeutic Target Expression and Promoter Methylation Between Primary Tumors and Their Multifocal Metastases. *Clin Cancer Res* 2008;14:1938-1946. *PMC Journal - In Process.*
10. Subhawong AP, Subhawong TK, Nassar H, Kouprina N, Begum S, Vang R, , Westra WH, Argani P. Most Basal-like Breast Cancers Demonstrate the same Rb-/p16+ immunophenotype as the HPV-Related Poorly-Differentiated Squamous Cell Carcinomas Which They Resemble Morphologically. *Am J Surg Pathol* 2009;33:163-175 *PMC Journal - In Process.*
11. Cao D, Polyak K, Halushka MK, Nassar H, Kouprina N, Iacobuzio-Donahue C, Wu X, Sukumar S, Hicks J, De Marzo A, Argani P. Serial analysis of gene expression of lobular carcinoma in situ identifies down regulation of claudin 4 and overexpression of matrix metalloproteinase 9. *Breast Cancer Research* 2008, 10:R91 (27 October 2008) *PMCID2614499.*
12. Cimino-Mathews A, Halushka M, Illei P, Wu X, Sukumar S, Argani P. Epithelial cell adhesion molecule (EpCAM) is overexpressed in breast cancer metastases. *Breast Cancer Research and Treatment* 2009 Dec 11 (Epub ahead of print) *PMC Journal - In Process.*

D. Research Support

Ongoing Research Projects

2P50CA103175-06A2 (Bhujwalla)
NCI JHU ICMIC Program

09/22/11 - 07/31/16

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.

1R01CA140226 (Raman) 04/10/10-03/31/15
NCI

Functional Imaging of TWIST-Induced Breast Cancer

The goal of this project is to functionally identify altered cellular physiology in a TWIST expressing background.

Completed Projects Within Last Three Years

Anonymous Foundation (Park) 02/01/10-01/30/12
Detecting PIK3Ca mutations in blood

P50 CA88843 -06A1 (Sukumar) 09/30/00-09/29/11
NCI

Specialized Program in Research Excellence (SPORE) in Breast Cancer

The major goal of this project is to support five translational research projects in this grant.

BCRF (Stearns) 10/01/09-09/30/11

A phase II study of simvastatin in women at risk for a new breast cancer.

The major goal of this project is to evaluate biomarkers that may predict response to statins as preventive agents for breast cancer

BC0030054 (Sukumar) 09/30/04-09/29/09
Department of Defense

Center of Excellence in Breast Cancer Metastasis

The major goal of this project is to study metastatic breast cancer.

05R01CA097226 (Raman) 03/15/04-02/28/09
NCI

The Role of HOXA5 in Breast Cancer

The major goal of this project is to study the expression and potential role of HOXA5 in the development of breast cancer.

CA123474 (Klein) 08/01/06-07/31/08
NCI

BRCA1 and Familial Pancreatic Cancer

The major goal of this project is to study the pathology of breast cancer in patients who have a familial history of pancreatic cancer.