

**BIOGRAPHICAL SKETCH**

Provide the following information for the Senior/key personnel and other significant contributors.  
Follow this format for each person. **DO NOT EXCEED FIVE PAGES.**

NAME: Stephen J. Freedland, MD

eRA COMMONS USER NAME (credential, e.g., agency login):freed011

POSITION TITLE: Professor of Urology

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 <i>(if applicable)</i>	Completion Date MM/YYYY	FIELD OF STUDY
UCLA: Los Angeles, CA	BS	06/93	Biology
UC Davis: Davis, CA	MD	06/97	Medicine
UCLA School of Medicine: Los Angeles, CA		06/03	Resident, Urology
Johns Hopkins School of Medicine: Baltimore, MD		10/05	Urological, Oncology

**Please refer to the Biographical Sketch sample in order to complete sections A, B, C, and D of the Biographical Sketch.**

I am a urological surgeon scientist devoted to improving outcomes for patients with urological cancers. My primary focus to date has been on prostate cancer research. I am especially interested in prostate cancer risk stratification, health disparities, and the role of obesity/lifestyle and its relationship with prostate cancer. To address these questions I run a basic science lab, conduct epidemiological research, as well as lead clinical trials. I have funding from several sources including NCI, DOD, and CDC. I am also the co-Director of the Cancer Prevention and Genetics Program, Director of the Center for Integrated Research on Cancer and Lifestyle (CIRCL) and Associate Director for Faculty Development of the Samuel Oschin Comprehensive Cancer Institute.

**Positions and Honors**

2000 – Present National Principal Investigator, SEARCH Database Study Group  
 2003 – 2005 Instructor in Urology, Johns Hopkins School of Medicine  
 2005 – 2008 Assistant Professor, Division of Urologic Surgery, Departments of Surgery and Pathology, Duke University School of Medicine  
 2005 – Present Staff Physician, Durham VA Medical Center  
 2006 – 2009 Director of Outcomes and Translational Research, Division of Urology, Departments of Surgery, Duke University School of Medicine  
 2008 – 2014 Associate Professor, Division of Urologic Surgery, Departments of Surgery and Pathology, Duke University School of Medicine  
 2009 – 2012 Vice Chief of Research, Division of Urology, Duke University  
 2010 – 2012 Associate Director for Clinical Research, Genitourinary Program, Duke Cancer Institute  
 2015 – Professor of Surgery (Urology), Cedars-Sinai Medical Center  
 2015 – Director, Center for Integrated Research on Cancer and Lifestyle, Cedars-Sinai  
 2015 – Co-Director, Cancer Prevention and Genetics Program, Samuel Oschin Comprehensive Cancer Institute, Cedars-Sinai Medical Center  
 2015 – Associate Director, Samuel Oschin Comprehensive Cancer Institute, Cedars-Sinai

**Other Experience and Professional Memberships**

1998 – Present American Urological Association — Active Member

2004 – Present American Association for Cancer Research – Active Member  
2005 – Present American Society for Clinical Oncology – Active Member  
2008 – 2015 Durham VA Institutional Review Board – Active Member  
2010 – Present Editor-in-Chief, Prostate Cancer and Prostatic Diseases  
2011 – 2014 North American Editor, European Urology

## **Honors**

1989 Eagle Scout, Boy Scouts of America  
1993 Phi Beta Kappa, UCLA  
2001 1<sup>st</sup> and 2<sup>nd</sup> Prize, Miley B. Wesson Resident Essay Competition, Western Section of the AUA  
2002 2<sup>nd</sup> Prize, AUA/ACMI Prize Essay Contest, Laboratory Research Category, National AUA  
2002 3<sup>rd</sup> Prize, Miley B. Wesson Resident Essay Competition, Western Section of the AUA  
2003 1<sup>st</sup> Prize Miley B. Wesson Resident Essay Competition, Western Section of the AUA  
2005 2<sup>nd</sup> and 3<sup>rd</sup> Prize, AUA/ACMI Prize Essay Contest, Clinical Research Category, National AUA  
2005 Alfred Blalock Research Award, Johns Hopkins Young Investigator's Day  
2006 Rising Star in Urology Award, American Urological Association Foundation  
2006 3<sup>rd</sup> Prize, AUA/ACMI Prize Essay Contest, Laboratory Research Category, National AUA  
2006 3<sup>rd</sup> Prize, AUA/ACMI Prize Essay Contest, Clinical Research Category, National AUA  
2007 1<sup>st</sup> Prize, AUA/ACMI Prize Essay Contest, Clinical Research Category, National AUA  
2007 2<sup>nd</sup> Prize, AUA/ACMI Prize Essay Contest, Laboratory Research Category, National AUA  
2007 Young Investigator Award, Society of Basic Urological Research  
2009 1<sup>st</sup> Prize, AUA/ACMI Prize Essay Contest, Laboratory Research Category, National AUA

## **Contributions to Science**

### **1. Risk stratification for prostate cancer**

As a practicing urologist, I am constantly faced with the dilemma of determining how aggressive a patient's cancer is. To address this problem, I focused much of my energies on risk stratification for prostate cancer at every point in the prostate cancer continuum from prior to diagnosis all the way to the time of development of castrate resistant prostate cancer and every step in between. Most of my work used standard variables available in all men – PSA, stage, grade, and PSA kinetics. However, we have also studied multiple molecular markers for their ability to better identify men with aggressive prostate cancer. Based upon my work in this area, I was the only person selected to serve on all 3 recent guideline panels for the American Urological Association – castrate resistant prostate cancer, prostate cancer detection, and clinically localized prostate cancer. In addition, I was asked to write a section for UpToDate on molecular tests for early stage prostate cancer. The vast majority of this work has used VA data – a nearly identical data source as proposed in this study.

**Freedland SJ**, Humphreys EB, Mangold LA, Eisenberger M, Walsh PC, and Partin AW. Risk of prostate cancer specific mortality following biochemical recurrence after radical prostatectomy. JAMA 2005;294: 433-439

**Freedland SJ**, Humphreys EB, Mangold LA, Eisenberger M, Dorey FJ, Walsh PC, and Partin AW. Death in patients with recurrent prostate cancer after radical prostatectomy: PSADT subgroups and their associated contributions to all-cause mortality. J Clin Onc 2007;25: 176-1771

**Freedland SJ**, Gerber L, Reid J, Welbourn W, Tikishvili E, Park J, Younus A, Gutin A, Sangale Z, Lanchbury JS, Salama JK, and Stone S. Prognostic utility of CCP score in prostate cancer after primary external beam radiation therapy. Int J. Rad Bio Ther, 2013;86: 848-53

Mithal P, Allott E, Gerber L, Reid J, Welbourn W, Tikishvili E, Park J, Younus A, Sangale Z, Lanchbury JS, Stone S, and **Freedland SJ**. PTEN loss in biopsy tissue predicts poor clinical outcomes in prostate cancer. Int J Urol, in press

### **2. Impact of lifestyle and obesity on prostate cancer**

Obesity is rampant in Western society and we were one of the leading groups in the world to highlight both the adverse effects of obesity on prostate cancer but also the challenges in appropriately diagnosing prostate cancer in obese men. We have further examined other lifestyle features (smoking, alcohol, exercise) and how they link with prostate cancer as well as explored mechanisms linking lifestyle and prostate cancer both through observational studies, but also basic science work.

**Freedland SJ**, Aronson WJ, Kane CJ, Presti JC Jr, Amling CL, Elashoff D, and Terris MK. Impact of obesity on biochemical control after radical prostatectomy for clinically localized prostate cancer. *J Clin Onc* 2004;22: 446-453

Bañez LL, Hamilton RJ, Partin AW, Vollmer RT, Sun L, Rodriguez C, Wang Y, Terris MK, Aronson WJ, Presti JC Jr, Kane CJ, Amling CL, Moul JW, and **Freedland SJ**. Obesity-related plasma hemodilution and PSA concentration among men with prostate cancer. *JAMA* 2007;298: 2275-2280

Masko EM, Thomas JA, Antonelli JA, Lloyd JC, Phillips TE, Poulton SH, Dewhirst MW, Pizzo SV, and **Freedland SJ**. Low-carbohydrate diets and prostate cancer: how low is “low-enough”? *Cancer Prev Res*, 2010;3: 1124-1131

Islami F, Moreira DM, Boffetta P, and **Freedland SJ**. A systematic review and meta-analysis of tobacco use and prostate cancer mortality and incidence in prospective cohort studies. *Eur Urol*, in press

### **3. Racial disparity in prostate cancer**

Black men in the US have the highest one of the highest incidence and mortality rates from prostate cancer in the world. The exact mechanisms underlying this association are unclear. We have focused on men diagnosed and treated with the VA health system, an equal access medical system, wherein barriers to care are minimized. Within this population, we still find differences in cancer recurrence rates after surgery and biological differences in tumor biology. On-going work in our groups is focused on understanding the molecular basis for the more aggressive prostate cancers in black men.

Hamilton RJ, Aronson WJ, Presti JC Jr., Terris MK, Kane CJ, Amling CL, and **Freedland SJ**. Race, biochemical recurrence, and PSADT after radical prostatectomy: results from the SEARCH database. *Cancer* 2007;110: 2202-2209

Bañez LL, Aronson WJ, Presti JC Jr., Terris MK, Kane CJ, Amling CL, and **Freedland SJ**. Race and time from diagnosis to radical prostatectomy: does equal-access mean equal timely access to the operating room? - results from the SEARCH database. *Cancer Epi Biomarkers Prev*, 2009;18: 1208-1212

Kim H, Moreira D, Jayachandran J, Gerber L, Bañez LL, Vollmer R, Lark A, Donovan M, Powell D, Khan F and **Freedland SJ**. Prostate biopsies from African-American men express higher levels of aggressive disease biomarkers than prostate biopsies from Caucasian men. *Pros Can Pros Dis*, 2011;14: 262-265

Chu DI, Moreira DM, Gerber L, Presti JC Jr., Aronson WJ, Terris MK, Kane CJ, Amling CL, and **Freedland SJ**. Effect of race and socioeconomic status on surgical margins and biochemical outcomes in an equal-access healthcare setting: results from the SEARCH database. *Cancer*, 2012;118: 4999-5007

#### **My Bibliography (409 publications):**

<http://www.ncbi.nlm.nih.gov/sites/myncbi/stephen.freedland.1/bibliography/44054643/public/?sort=date&direction=ascending>

#### **Research Support**

##### **Ongoing Research Support**

Centers for Diseases Control 1U01DP006079 (Freedland/Anger/Kim) 9/30/15-9/29/20

*The Epidemiology of Interstitial Cystitis in a Nationwide Multiethnic VA Cohort*

The purpose of this study is to estimate the national prevalence of interstitial cystitis using a VA cohort

NIH R01 CA1791115 (Vickers) <i>Dynamic, multi-cohort prediction modeling of prostate biopsy outcome</i> This is a multi-center study to analyze data from men undergoing prostate biopsy to develop a dynamic prediction model for assessing prostate cancer risk	8/1/14-7/31/19
DOD PC141010 (Fowke) <i>Magnesium predicts high-grade prostate cancer</i> This is a DOD health disparity grant to analyze the role of magnesium in predicting high-grade prostate cancer and in helping to explain racial disparities in prostate cancer using samples from the Durham VA hospital	9/1/15-8/31/17
NIH K24 CA160653-01 (Freedland) <i>Midcareer Investigator Award</i> This is a midcareer investigator award to Dr. Freedland to support his efforts for his own research program in patient oriented research and to mentor junior investigators	8/1/12-7/31/17
NIH U01 CA158431-01 (Ostrer) <i>Genomics and Predictive Modeling of Prostate Cancer Health Disparity</i> The goal of this study is to determine genetic predictors of aggressive prostate cancer biology and see how these signatures differ by race.	9/1/11-8/31/16
Atkins Foundation (Freedland) <i>Randomized Controlled Clinical Trial of Carbohydrate Restriction among Men Initiating Androgen Deprivation Therapy for Prostate Cancer</i> This is a three-site randomized trial of carbohydrate restriction with exercise vs. no intervention control among 100 men initiating androgen deprivation therapy for advanced prostate cancer with the goal of preventing impaired insulin sensitivity that often occurs after starting androgen deprivation therapy. I am overall PI.	4/1/08-3/31/16
<b><u>Completed Research Support:</u></b> Department of Defense PC110974 (Ostrer) <i>Genomic Basis of Prostate Cancer Health Disparity Among African-American Men</i> The goal of this study is to determine genetic predictors of aggressive prostate cancer biology and see how these signatures differ by race.	7/1/12-6/30/15
Department of Defense (Pizzo/Bachelder) The goal of this study to examine the role of GRP78 as a marker of prostate cancer stem-like cells and explore GRP78 as a potential therapeutic target for prostate cancer	10/1/12-12/31/14
Atkins Foundation (Freedland) <i>Randomized Controlled Clinical Trial of Carbohydrate Restriction among Men with a Rising PSA after Failed Primary Therapy for Prostate Cancer</i> This is a one-site randomized trial of carbohydrate restriction vs. no intervention control among 60 men with a rising PSA after failed primary therapy with the goal of slowing the rate of PSA rise.	7/1/13-12/31/14
NIH K12 DK100024-01 (Freedland) <i>Duke KURe Program</i> This is a K12 to help train the next generation of urological researchers	8/1/13-12/31/14
NIH R01 CA131235 (Freedland/Pizzo) <i>Resveratrol, Carbohydrate Restriction and Prostate Cancer Progression</i> The goals of this grant are: 1) Determine the maximum carbohydrate amount that is still a "low-carbohydrate diet" and delays prostate cancer growth 2) optimize resveratrol to inhibit prostate cancer growth, and 3) test if there is synergy between resveratrol and low-carbohydrate diets for slowing prostate cancer xenograft growth	9/15/08-9/14/14
Department of Defense PC100266 (Shinohara)	8/1/11-7/31/14

*Targeting a Novel Intracellular Isoform of Osteopontin in Innate Immunology to Suppress Prostate Cancer Progressions*

The goal is to test the role of inhibiting a novel intracellular isoform of osteopontin and assessing its impact on immune function and prostate cancer development in various animal models of prostate cancer.

NIH 5 R01CA134425-04 (Walter)

7/1/2009-4/30/13

*Prostate Specific Antigen Practices and Outcomes in the Elderly*

The goal of this study is to examine the downstream consequences of excessive PSA testing in older men

Department of Defense PC094163 (Muller; Freedland Mentor)

4/15/09-4/14/13

*Recurrence after Radical Prostatectomy: Is it Different in Black Men?*

This is a Health Disparity Research – Prostate Scholar Award to Dr. Muller to study the natural history of recurrence after surgery and examine whether it differs by race. Dr. Freedland serves as Dr. Muller's mentor.

NIH U54 CA156735-01 (Richardson)

9/1/10-8/31/13

*CB2 Cannabinoid Receptor-mediated Regulation of Prostate Cancer Growth*

The goal is test the anti-prostate cancer properties of targeting the CB2 Cannabinoid Receptor using both in vitro and in vivo prostate cancer models.

Pom Wonderful, LLC (Freedland)

5/15/09-10/14/13

*Effects of Pomegranate Pills in Men with Prostate Cancer*

Test the effect of pomegranate pills (POMx) on prostate cancer biomarkers in men undergoing surgery