

**CURRICULUM VITAE**

**Name:** Sungyong You

**Personal History**

**Current Position:** Research Scientist I

**Affiliation:** Division of Cancer Biology and Therapeutics  
Department of Surgery, Department of  
Biomedical Sciences, Cedars-Sinai Medical  
Center

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**Education and Training**

- 1997 - 2001 **BS, College of Agriculture and Life Sciences, Seoul National University**  
Major: Insect Molecular Biology  
Thesis: Purification of phase II enzyme in fat body.
- 2003 - 2005 **MS, College of Pharmacy, Seoul National University**  
Major: Network Biology, Angiogenesis  
Thesis: *In silico* screening of angiogenesis-related genes in hepatocellular carcinoma using protein-protein interaction and expression data.  
Advisor: Professor Kyu-Won Kim
- 2008 - 2012 **PhD, Interdisciplinary Bioscience and Biotechnology, Pohang University of Science and Technology (POSTECH)**  
Major: Systems Biology, Rheumatology, Network Biology  
Thesis: Development of systems biology approaches for understanding pathogenic mechanisms and identification of key molecules  
Advisors: Professors Daehee Hwang and Wan-Uk Kim
- 2012 - 2013 **Postdoctoral fellow, Division of Cancer Biology and Therapeutics, Department of Surgery, Department of Biomedical Sciences, Cedars-Sinai Medical Center**  
Research Interests: Systems Biology, Prostate cancer, Network Biology  
Projects: 1) An epigenomic pathway from cholesterol to intracrine androgen,  
2) Understanding mechanisms of cancer metastasis via loss of DIAPH3,  
3) Discovering urinary metabolic marker for Interstitial Cystitis/Painful Bladder

Syndrome (IC/PBS), 4) Development of computational infrastructure for omics data analysis, 5) Development of a novel prostate cancer classification scheme through an integrative approach  
 Advisors: Professors Jayoung Kim and Michael R. Freeman

### **Professional and Academic Experience**

- 2003 - 2005    **Teaching Assistant**, College of Pharmacy, Seoul National University, Seoul, South Korea.
- 2005 - 2008    **Teaching Assistant**, National Core Research Center for Systems Bio-Dynamics, Pohang University of Science and Technology (POSTECH), Pohang, South Korea.
- 2005 - 2008    **Manager of Bioinformatics Core**, National Core Research Center for Systems Bio-Dynamics, Pohang University of Science and Technology (POSTECH), Pohang, South Korea.
- 2007 - 2008    **System Developer**, Interdisciplinary Bio Central Journal, Pohang University of Science and Technology (POSTECH), Pohang, South Korea.
- 2009 - 2012    **Mentor of Student Mentoring Program**, School of Interdisciplinary Bioscience and Bioengineering, Pohang University of Science and Technology (POSTECH), Pohang, South Korea.
- 2009 - 2012    **Teaching Assistant**, School of Interdisciplinary Bioscience and Bioengineering, Pohang University of Science and Technology (POSTECH), Pohang, South Korea.
- 2014 - 2016    **Project Scientist**, Department of Surgery, Department of Biomedical Sciences, Cedars-Sinai Medical Center, USA.
- 2014 - 2016    **Instructor**, Department of Surgery, Department of Biomedical Sciences, Cedars-Sinai Medical Center, USA.
- 2016 - Present    **Research Scientist I**, Department of Surgery, Department of Biomedical Sciences, Cedars-Sinai Medical Center, USA.

### **Professional Activities**

#### **Professional Societies:**

- 2005            Member of Korean Society for Bioinformatics and Systems Biology
- 2010            Member of Korean Collage of Rheumatology

### **Honors and Special Awards**

- 2002 Web-Master honored by Korea Association for ICT Promotion, South Korea.
- 2002 Linux-Master honored by Korea Association for ICT Promotion, South Korea.
- 2011 Graduate Student Fellowship Award of Boryung Pharmaceutical Co., South Korea.
- 2008 - 2012 Pohang University of Science and Technology (POSTECH) Graduate Student Scholarship Award, South Korea.
- 2013 Best Poster Award, The 2013 American Urological Association Annual Meeting, American Urological Association, USA
- 2014 Research Scholar Award, Urology Care Foundation Research Scholars Program, American Urological Association, USA
- 2014 Postdoctoral Training Award, Prostate Cancer Research Program (PCRP) Scholars Program, Department of Defense, USA

### **Lectures and Teaching Experiences**

#### **Lectures:**

- 2009 - 2010 **Computational Biology I and II**  
School of Interdisciplinary Bioscience and Bioengineering,  
POSTECH, Pohang, South Korea  
*Prep time:* 12 hours/year for each year
- 2010 - 2011 **Systems Biology (Advanced level)**  
School of Interdisciplinary Bioscience and Bioengineering,  
POSTECH, Pohang, South Korea  
*Prep time:* 12 hours/year for each year

#### **Teaching in the laboratory setting:**

- 2012 - Present Training of Omics data analysis skills, Fangjin Huang (Research Assistant at Cedars-Sinai Medical Center)
- 2012 - Present Numerous presentations to the Cancer Biology Program, Cedars-Sinai Medical Center
- 2013 - Present Numerous presentations at the Computational Biology Workgroup Project Meeting, Cedars-Sinai Medical Center
- 2013 Teaching of transcriptomics data analysis, Venkat Masarapu and Derek Ho Undergraduate Students, Johns Hopkins University Medical School Summer Program

2015 - Present Introduction to Bioinformatics lectures, The Urologic Oncology Program in Cedars-Sinai Medical Center

### **Invited Talks:**

- 2010 A systems approach to rheumatoid arthritis.  
The 8<sup>th</sup> Synovitis Research Conference, Seoul, Korea.
- 2011 A systems approach to complex human disease: Network-driven identification of pathogenic mechanisms and potential molecular targets.  
The 5<sup>th</sup> Asian Young Researchers Conference on Computational and Omics Biology (AYRCOB). Daejeon, Korea
- 2011 A systems approach to rheumatoid arthritis.  
The 10<sup>th</sup> World Congress of Inflammation. Paris, France.
- 2012 A systems approach to complex human diseases: Network-driven identification of pathogenic mechanisms and potential targets.  
The 12<sup>th</sup> Convergence Research Consortium for Immunologic Disease (CRCID) Seminar, St. Mary's Hospital, Seoul, Korea.
- 2015 An epigenomic pathway from cholesterol to intracrine androgen. The Western Section American Urological Association (AUA) Meeting, held in Palm Springs, California, USA.
- 2016 Integrated classification of prostate cancer reveals a novel luminal subtype with poor outcome. The 2016 American Urological Association (AUA) Summer Research Conference, held in Linthicum, Maryland, USA.

### **Publications/Bibliographies**

#### **A. Research Papers - Peer-Reviewed (Published):**

1. Sohn, TK., Cha, J., Choi, YS., Won, Y., Lee, SK., You, S., Ma, S., Kong, EB., Lee, H., Kang, SH., Kim, KW.. "AngioDB: Database of angiogenesis and angiogenesis-related molecules", *Nucleic Acids Research.*, 30; 369-371. (2002)
2. Kim, SY., Lee, SW., You, S., Rha, SY., Kim, KW., "*In silico* screening for angiogenesis-related genes in rat astrocytes", *Genomic & Informatics.*, Mar 2(1):34-44. (2004)
3. Rho, S\*, You, S\*, Kim, Y., Hwang, D., "From proteomics toward systems biology: integration of different types of proteomics data into network models", *BMB Reports.*, 41(3):184-93. (2008) \* co-first author
4. Song, E., Yang, YH., Lee, BR., Kim, EJ., Kim, JN., Park, SS., Lee, K., Kim, WS., You, S., Hwang, D., Kim, BG., "An integrative approach for high-throughput screening and characterization of transcriptional regulators in *Streptomyces coelicolor*", *Pure and Applied Chemistry.*, 82(1):1-11. (2010)

- Applied Chemistry, 82:55-67. (2010)
5. Kim, Y., Kim, TK., Kim, Y., Yoo, J., You, S., Lee, I., Carlson, G., Hood, L., Choi, S., Hwang, D., “Principal network analysis: Identification of subnetworks representing major dynamics using gene expression data”, *Bioinformatics*, 27(3):391-8. (2011)
  6. Moon, PG., Lee, JE., You, S., Kim, TK., Cho, JH., Kim, IS., Kwon, TH., Kim, CD., Park, SH., Hwang, D., Kim, YL., Beak, MC., “Proteomic analysis of urinary exosomes from patients of early IgA nephropathy and thin basement membrane nephropathy”, *Proteomics*, 11(12):2459-75. (2011)
  7. Yoon, HY\*, You, S\*, Yoo, SA., Kim, NH., Kwon, HM., Yoon, CH., Cho, CS., Hwang, D., Kim, WU., “NF-AT5 is a critical regulator of inflammatory arthritis”, *Arthritis & Rheumatology*, 63(7):1843-52. (2011) \* co-first author
  8. Yoo, SA., You, S., Yoon, HJ., Kim, DH., Kim, HS., Lee, K., Ahn, JH., Hwang, D., Lee, AS., Kim, KJ., Park, YJ., Cho, CS., Kim, WU., “A novel pathogenic role of the ER chaperone GRP78/BiP in rheumatoid arthritis”, *The Journal of Experimental Medicine*, 209(4):871-86. (2012)
  9. Kim, J., Keay, SK., You, S., Loda, M., Freeman, MR., “A synthetic form of frizzled 8-associated antiproliferative factor enhances p53 stability through USP2a and MDM2”, *PLoS One*, 7(12):e50392. (2012)
  10. You, S., Cho, CS., Lee, I., Hood, L., Hwang, D., Kim, WU., “A systems approach to rheumatoid arthritis”, *PLoS One*, 7(12):e51508. (2012)
  11. Kim, C., Ho, DH., Suk, JE., You, S., Michael, S., Kang, J., Lee, SJ., Masliah, E., Hwang, D., Lee, HJ., “Neuron-released oligomeric  $\alpha$ -synuclein is an endogenous agonist of TLR2 for paracrine activation of microglia”, *Nature Communications*, 4:1562. (2013)
  12. Ayala, G., Morello, M., Frolov, A., You, S., Li, R., Rosati, F., Bartolucci, G., Danza, G., Adam, RM., Thompson, TC., Lisanti, MP., Freeman, MR., Di Vizio, D., “Loss of Caveolin-1 in prostate cancer stroma correlates with reduced relapse-free survival and is functionally relevant to tumor progression”, *The Journal of Pathology*, 231(1):77-87. (2013)
  13. Mukhopadhyay, NK., Kim, J., You, S., Hager, MH., Lopez, D., Morello, M., Ramachandran, A., Yang, J., Cinar, B., Rubin, MA., Adam, RM., Oesterreich, S., Di Vizio, D., Freeman, MR., “Scaffold Attachment Factor B1 regulates the androgen receptor in concert with the growth inhibitory kinase MST1 and the methyltransferase EZH2”, *Oncogene*, Jun 19;33(25):3235-45. (2014)
  14. You, S., Yoo, SA., Choi, S., Kim, JY., Park, SJ., Ji, DJ., Kim, TH., Kim, KJ., Cho, CS., Hwang, D., Kim, WU., “Identification of key regulators for the migration and invasion of rheumatoid synoviocytes through a systems approach”, *Proceedings of the National Academy of Sciences of the United States of America*, Jan 7; 111(1): 550–555. (2014)
  15. Chu, G., Zhau, HE., Wang, R., Rogatko, A., Feng, X., Zayzafoon, M., Liu, Y., Farach-Carson, MC., You, S., Kim, J., Freeman, MR., Chung, LWK., “RANK- and c-Met-

- mediated signal network promotes prostate cancer metastatic colonization”, *Endocrine-Related Cancer*, 21, 311–326. (2014)
16. Kim, C., Cho, ED., Kim, H., You, S., Lee, H., Hwang, D., Lee, SJ., “ $\beta$ 1-integrin-dependent migration of microglia by neuron-released  $\alpha$ -synuclein”, *Experimental & Molecular Medicine*, Apr; 46(4): e91. (2014)
  17. Choi, DY\*, You, S\*, Jung, JH., Lee, JC., Rho, JK., Lee, KY., Freeman, MR., Kim, KP., Kim, J., “Extracellular vesicles shed from gefitinib-resistant non-small cell lung cancer regulate the tumor microenvironment”, *Proteomics*, Aug;14(16):1845-56. (2014) \* co-first author
  18. Yang, W\*., Ramachandran, A\*., You, S\*., Jeong, HB., Morley, S., Logvinenko, T., Kim, J., Hwang, D., Freeman, MR., Adam, RM., “Integration of proteomic and transcriptomic profiles identifies a novel PDGF-MYC network in human smooth muscle cells”, *Cell Communication and Signaling*, Aug 1;12(1):44. (2014) \* co-first author
  19. Wen, H., Lee, T., You, S., Park, SH., Song, H., Elber, K., Anger, JT., Freeman, MR., Park, S., Kim, J., “Urinary metabolite profiling combined with computational analysis predicts interstitial cystitis-associated candidate biomarkers”, *Journal of Proteome Research*, Jan 2;14(1):541-8. (2014)
  20. Kang, MJ\*., Park, YJ\*., You, S\*., Yoo, SA., Choi, S., Kim, DH., Cho, CS., Yi, EC., Hwang, D., Kim, WU., “A urinary proteome profile predictive of disease activity in rheumatoid arthritis”, *Journal of Proteome Research*, Nov 7;13(11):5206-17. (2014) \* co-first author
  21. Lee, N\*., You, S\*., Lee, WW., Shin, MS., Kang, KS., Kim, SH., Shaw, AC., Chupp, GL., Hwang, D., Kang, I., “IL-6 receptor  $\alpha$  defines effector memory CD8(+) T cells producing Th2 cytokines and expanding in asthma”, *American Journal of Respiratory and Critical Care Medicine*, Dec 15;190(12):1383-94. (2014) \* co-first author
  22. Jung, JH., Lee, MY., Choi, DY., You, S., Kim, J., Kim, KP., “Phospholipids of tumor extracellular vesicles stratify of gefitinib-resistance non-small cell lung cancer cells from gefitinib-sensitive cells”, *Proteomics*, Feb;15(4):824-35. (2014)
  23. Minciacchi, VR\*., You, S\*., Cristiana S., Morley, S., Zandian, M., Paul-Joseph A., Lorenzo C., Chiara C., Reis-Sobreiro, M., Morello, M., Geetanjali K., Su Jang., Dae-Kyum Kim., Elhan HB., Emma TG., Martin G., Yong G., Surech M., Yang, J., Yang, W., Freeman, MR., Di Vizio, D., “Large oncosomes contain distinct protein cargo and represent a separate functional class of tumor-derived extracellular vesicles”, *Oncotarget*, May 10;6(13):11327-41. (2015) \* co-first author
  24. Lee, JH. \*, You, S. \*, Hyeon, DY., Kang, B., Kim, H., Park, KM., Han, B., Hwang, D., Kim, S., “Comprehensive data resources and analytical tools for pathological association of aminoacyl tRNA synthetases with cancer”, *Database (Oxford)*, Mar 29;2015. pii: bav022. (2015) \* co-first author
  25. Morley, S., You, S., Pollan, S., Choi, J., Zhou, B., Hager, MH., Steadman, K., Spinelli, C., Rajendran, K., Gertych, A., Kim, J., Adam, RM., Yang, W., Krishnan, R., Knudsen, B., Di Vizio, D., Freeman, MR., “Regulation of microtubule dynamics by DIAPH3

- influences amoeboid tumor cell mechanics and sensitivity to taxanes”, *Scientific Reports*, July. 5(12136):1-16. (2015)
26. Shin, MS., You, S., Kang, Y., Lee N., Yoo, SA., Park, K., Kang, KS., Kim, SH., Mohanty, S., Shaw, AC., Montgomery, RR., Hwang, D., Kang, I., “DNA methylation regulates the differential expression of CX3CR1 on human IL-7R $\alpha$ <sup>low</sup> and <sup>high</sup> effector memory CD8+ T cells with distinct migratory capacities to the fractalkine”, *Journal of Immunology* Sep 15;195(6):2861-9. (2015)
  27. Gururajan, M., Cavassani, KA., Sievert, M., Duan, P., Lichterman, J., Huang, JM., Smith, B., You, S., Nandana S, Chu GC, Mink S, Jossou S, Liu C, Morello M, Jones LW, Kim J, Freeman MR, Bhomwick N, Zhau HE, Chung LW, Posadas EM., “SRC family kinase FYN promotes the neuroendocrine phenotype and visceral metastasis in advanced prostate cancer”, *Oncotarget*, Dec 29;6(42):44072-83. (2015)
  28. Han, EJ., Yoo, SA., Kim, GM., Hwang, D., Cho, CS., You, S\*, Kim, WU\*, “GREM1 is a key regulator of synovial hyperplasia in rheumatoid arthritis”, *The Journal of Rheumatology*, Mar;43(3):474-85. (2016) \* co-corresponding author
  29. You, S., Knudsen, BS., Erho, N., Alshalalfa, M., Takhar, M., Ashab, HA., Davicioni, E., Karnes, RJ., Klein, EA., Den, RB., Ross, AE., Schaeffer, EM., Garraway, IP., Kim, J., Freeman, MR., “Integrated classification of prostate cancer reveals a novel luminal subtype with poor outcome”, *Cancer Research*, Jun 14. pii: canres.0902.2016. (2016) \* This work has been highlighted in Research Highlights Section in *Nature Reviews Urology* entitled “Prostate cancer: Novel subtyping could aid stratification and therapy” (2016) July 5. doi:10.1038/nrurol.2016.130

#### **B. Research Papers - Peer-reviewed (submitted):**

1. Choi, S., You, S., Choi, SY., Kwon, HM., Kim, HS., Hwang, D., Cho, CS., Kim, WU., “NFAT5 promotes macrophage survival in rheumatoid arthritis”
2. Li, Q., Yin, L., Jones, L., Chu, G., Wu, JB., Huang, JM., Li, W., You, S., Kim, J., Lu, Y-T., Mrdenovic, S., Wang, S., Freeman, MR., Garraway, I., Lewis, M., Chung, LWK., “Keratin 13 expression drives bone and brain metastases of human prostate cancer cells”
3. Choi, BW., You, S., Park, CS., Cho, EH., Park, T., Ki., Kim, YJ., Lee, T., Kim, J., “Differential Perturbation of the Interstitial Cystitis-Associated Genes of Bladder and Urethra in Rat Model”

#### **C. Reviews (Published)**

1. Kim, S., You, S., Hwang, D., “Aminoacyl-tRNA synthetases and tumorigenesis: more than housekeeping”, *Nature Reviews Cancer*, 11(10):708-718. (2011)
2. Moon, PG., You, S., Lee, JE., Hwang, D., Beak, MC., “Urinary exosomes and proteomic”, *Mass Spectrometry Reviews*, 30(6):1185-202. (2011)
3. Park, JB., Lee, CS., Jang, JH., Ghim, J., Kim, YJ., You, S., Hwang, D., Suh, PG., Ryu, SH., “Phospholipase signaling networks in cancer”, *Nature Reviews Cancer*, 12(11):782-92. (2012)

4. You, S., Yang, W., Anger, JT., Freeman, MR., Kim, J., “‘Omics’ approaches to understanding interstitial cystitis/painful bladder syndrome/bladder pain syndrome”, *International Neurourology Journal*, 16(4):159-68. (2012)

#### **D. Book Chapters**

1. Kim, WU., You, S., Hwang, D., “Chapter 11. Systems Approaches to Autoimmune Diseases”, *Experimental Approaches for the Investigation of Innate Immunity: The Human Innate Immunity Handbook*, World Scientific Publishing Co. International Standard Book Number (ISBN): 978-981-4749-66-4. (2016)

#### **E. Abstracts**

1. You, S., Yang, J., Freeman, MR., Kim, J., “A computational biology approach identifies a DIAPH3, NFkB and NFAT5 pathway in the mesenchymal-amoeboid transition (MAT) in prostate cancer”, The 4<sup>th</sup> Annual Cancer Institute Research Poster Presentation, Cedars-Sinai Medical Center Research Day, held in Los Angeles, California, June 2012
2. You, S., Yang, J., Rotinen, M., Morley, S., Freeman, MR., Kim, J., “A computational analysis identifies a DIAPH3, NFAT5, and AKR1C1 pathway in the amoeboid transition in prostate cancer”, The 2012 Society for Basic Urologic Research (SBUR) Fall Symposium, held in Miami, Florida, November 2012
3. You, S., Anger, J., Lee, T., Keay, S., Freeman, MR., Kim, J., “A signaling networking evoked by the Interstitial cystitis-associated frizzled 8-related antiproliferative factor”, The 4<sup>th</sup> Annual Cedars-Sinai Medical Center Research Day, held in Los Angeles, California, January 2013
4. You, S., Morley, S., Di Vizio, D., Kim, J., Freeman, MR., “Microvesicles shed from DIAPH3-silenced, amoeboid prostate cancer cells enhance growth of other tumor cells and suppress proliferation of immune cells”, The 4<sup>th</sup> Annual Cedars-Sinai Medical Center Research Day, held in Los Angeles, California, January 2013
5. You, S., Yun, SJ., Kim, HL., Posadas, E., Knudsen, B., Loda, M., Freeman, MR., Kim, WJ., Kim, J., “An EGFR subcellular trafficking network in chemoresistant bladder cancer”, The American Urological Association Annual Meeting, held in San Diego, California, May 2013
6. You, S., Yang, J., Rotinen, M., Morley, S., Freeman, MR., Kim, J., “NFAT5 as a Transcriptional Mediator of Mesenchymal-Amoeboid Transition Induced by DIAPH3 Loss in Prostate Cancer”, The American Urological Association Annual Meeting, held in San Diego, California, May 2013
7. You, S., Anger, J., Lee, T., Keay, S., Michael, MR., Kim, J., “A Signaling Networking Evoked by the Interstitial Cystitis-Associated Frizzled 8-Related Antiproliferative Factor”, The American Urological Association Annual Meeting, held in San Diego, California, May 2013
8. You, S., Rotinen, M., Yang, J., Di Vizio, D., Knudsen, B., Kim, J., Freeman, MR., “Systematic identification of functional targets of the chromatin scaffold SAFB1 suggests



- a role in steroid metabolism in castration resistant prostate cancer”, Joint USC/UCLA Bioinformatics Fall 2013 Symposium, held in Los Angeles, California, October 2013
9. Morley, S., Pollan, SG., You, S., Knudsen, BS., Freeman, MR., “The formin, DIAPH3, regulates response to MT stabilizing drugs in prostate and breast cancer”, American Association for Cancer Research (AACR) Annual Meeting, held in San Diego, California, April 2014
  10. Minciocchi, VR., Morello, M., You, S., Yang, W., Sobreiro, M., Spinelli, C., Zandian, M., Rotinen, M., Morley, S., Adam, R., Freeman, MR., Di Vizio, D., “Large oncosomes are internalized and functionally modulate transcription factors in recipient cells”, American Association for Cancer Research (AACR) Annual Meeting, held in San Diego, California, April 2014
  11. You, S., Kim, J., Freeman, MR., “An epigenomic pathway from cholesterol to intracrine androgen”, The 2014 American Urological Association (AUA) Annual Meeting, held in Orlando, Florida, May 2014
  12. You, S., Kim, J., Freeman, MR., “Prostate Cancer Classification Using a Transcriptome Atlas”, The Prostate Cancer Foundation (PCF) 21st Annual Scientific Retreat, held in Carlsbad, California, October 2014
  13. Wen, H., Lee, T., You, S., Park, SH., Song, H., Eilber, K., Anger, J., Freeman, MR., Park, S., Kim, J., “Noninvasive Biomarker Candidates of Interstitial Cystitis/Painful Bladder Syndrome”, Winter Meeting of Society of Urodynamics, Female Pelvic Medicine & Urogenital Reconstruction (SUFU), held in Miami, Florida, February 2015
  14. You, S., Lee, T., Keay, S., Anger, J., Freeman, MR., Kim, J., “Signal Network of Interstitial cystitis-associated Antiproliferative peptide”, Winter Meeting of Society of Urodynamics, Female Pelvic Medicine & Urogenital Reconstruction (SUFU), held in Miami, Florida, February 2015
  15. You, S., Kim, J., Freeman, MR., “Prostate cancer classification using a transcriptome atlas.” American Association for Cancer Research (AACR) Special Conference, held in San Francisco, California, February 2015
  16. Han, EJ., Choi, S., Hwang, D., You, S., Kim, WU., “Grem1 is a key regulator of synovial hyperplasia in rheumatoid arthritis”, IMMUNOLOGY 2015, New Orleans, Louisiana, May 2015
  17. You, S., Erho, N., Alshalalfa, M., Takhar, M., Ashab, HA., Davicioni, E., Karnes, J., Klein, EA., Den, RB., Garraway, IP., Knudsen, BS., Kim, J., Freeman, MR., “Three intrinsic subtypes of prostate cancer with distinct pathway activation profiles differ in prognosis and treatment response”, The Prostate Cancer Foundation (PCF) 22nd Annual Scientific Retreat, held in Washington, DC, October 2015
  18. You, S., Knudsen, BS., Erho, N., Alshalalfa, M., Takhar, M., Ashab, HA., Davicioni, E., Karnes, J., Klein, EA., Den, RB., Garraway, IP., Kim, J., Freeman, MR., “Three intrinsic subtypes of prostate cancer with distinct pathway activation profiles differ in prognosis and treatment response”, The 2016 American Urological Association (AUA) Annual Meeting, held in San Diego, California, May 2016

**Patents**

1. Kim, WU., Cho, CS., Hwang, D., You, S., Yoon, HJ., “Compositions comprising NFAT5 inhibitor as an active ingredient for preventing or treating of angiogenesis-related diseases”, Application Number: 10-2010-0037515, 2011
2. Hwang, D., Kim, WU., Cho, CS., You, S., Yoon, HJ., “Markers for diagnosing angiogenesis-related diseases and use thereof”, Registration Number: 10-1204620, 2012
3. Kim, HK., Rho, S., Hwang, D., Park, KU., Lee, YM., Yoon, SJ., You, S., “Systems Biological Method of Biomarker Selection For Diagnosis of Lung Cancer, Subtype of Lung Cancer, And Biomarker Selected By The Same”, Registration Number: 10-1378919, 2014
4. Kim, WU., Hwang, D., Yi, CE., Kang, MJ., Park, YJ., You, S., “Biomarkers for assessing rheumatoid arthritis disease activity”, Application Number: 10-2014-0076050, 2014
5. You, S., Freeman, MR., Kim, J., Knudsen, B., “Method of Diagnosing and Treating Prostate Cancer”, Reference Number: 065472-000582PR00, 2015
6. Rotinen, M., You, S., Murali, R., Freeman, MR., “Agent for Treating Castration Resistant Prostate Cancer”, Reference Number: 065472-000593PR00, 2015

**Current Research Support**

Urology Care Foundation	(You, S)	7/1/14-6/30/17
An Epigenomic Pathway from Cholesterol to Intracrine Androgen		
Award Amount: \$80,000		
Effort: 7.92 calendar months		
Role: PI		
NIH/NCI	(Chung)	3/3/15-2/29/20
Prostate Cancer Bone Metastasis Biology and Targeting		
Award Amount: \$8,254,369		
Effort: 4.08 calendar months		
Role: Bioinformatician		
Department of Defense	(Freeman)	9/1/16-8/31/19
A Master Regulator of Aggressive Prostate Cancer Variants		
Award Amount: \$656,250		
Effort: 1.8 calendar months		
Role: Bioinformatician		

**Funded and Pending Start-Up**

Department of Defense	(Di Vizio)	9/1/16 – 6/30/18
Large Oncosomes: A Novel Liquid Biopsy for Genetic Profiling in Patients with Castration		

Resistant Prostate Cancer  
Award Amount: \$634,128  
Effort: 1.2 calendar months  
Role: Bioinformatician

**Pending Research Support**

National Institutes of Health (Freeman) 9/1/16-8/31/19  
Interactions of the Microbiome with the Bladder Urothelium: Defining Normal  
Award Amount: \$1,171,143  
Effort: 1.2 calendar months  
Role: Bioinformatician

Department of Defense (Freeman) 4/1/17 – 3/31/19  
Racial Differences in Prostate Cancer Molecular Subtyping  
Award Amount: \$1,050,000  
Effort: 1.2 calendar months  
Role: Co-Investigator

Department of Defense (Macias) 4/1/17 – 3/31/19  
Integrated Approach to identify race specific targets  
Award Amount: \$1,046,284  
Effort: 0.6 calendar months  
Role: Co-Investigator

**Past Research Support**

Department of Defense (You, S) 9/1/14-7/31/16  
Scaffold Attachment Factor B1: A Novel Chromatin Regulator of Prostate Cancer Metabolism  
Award Amount: \$124,200  
Effort: 7.8 calendar months  
Role: PI