

Jin Gyoon Park, PhD (jin.park.1@asu.edu)

Education and Research Experiences

2016-present Assistant Research Professor

- Center for Personalized Diagnostics Biodesign Institute, Arizona State University, USA
- Cancer biology, systems biology, and functional genomics

2010-2016 Bioinformatics Research Scientist

- Center for Personalized Diagnostics Biodesign Institute, Arizona State University, USA
- Cancer genomics/proteomics/transcriptomics, metagenomics, functional genomics, biomarker discovery, and predictive modeling

2005-2010 Postdoctoral Fellow

- Dr. Tony Pawson, Lunenfeld-Tanenbaum Research Institute, University of Toronto, Canada
- Discovery of novel signaling components by combined approach of computational and experimental systems biology

2003-2004 Postdoctoral Fellow

- Dr. Michael Czech, University of Massachusetts Medical School, USA
- siRNA-based functional genomic screening for insulin signaling regulators

2003 PhD in Molecular Medicine

- Dr. Michael Czech, University of Massachusetts Medical School, USA
- Signaling mechanism of insulin-stimulated GLUT4 vesicle trafficking

1998 MSc in Biochemistry and Molecular Biology

- Dr. Hyo-Sung Ro, Dalhousie University, Canada
- Heterotrimeric G protein signaling in adipogenesis and obesity

1991 BSc in Biology

- Yonsei University, Seoul, Korea

Research Areas and Selected Publications

Full publication list:

<http://www.ncbi.nlm.nih.gov/sites/myncbi/1NUGaavumgIQj/bibliography/45809616/public/?sort=date&direction=descending>

1. Functional genomics and computational biology approaches for cancer

- A human organotypic microfluidic tumor model permits investigation of the interplay between patient-derived fibroblasts and breast cancer cells. Truong DD, Kratz A, Park JG, Barrientos ES, Saini H, Nguyen T, Pockaj B, Mouneimne G, LaBaer J, Nikkhah M. *Cancer Res.* 2019 Jun 15;79(12):3139-3151
- Multifunctional CRISPR-Cas9 with engineered immunosilenced human T cell epitopes. Ferdosi SR, Ewaisha R, Moghadam F, Krishna S, Park JG, Ebrahimkhani MR, Kiani S, Anderson KS. *Nat Commun.* 2019 Apr 23;10(1):1842
- Human papilloma virus specific immunogenicity and dysfunction of CD8+ T cells in head and neck cancer. Krishna S, Ulrich P, Wilson E, Parikh F, Narang P, Yang S, Read AK, Kim-Schulze S, Park JG, Posner M, Wilson Sayres MA, Sikora A, Anderson KS. *Cancer Res.* 1;78(21):6159-6170 (2018)

- Ibrutinib inhibition of ERBB4 reduces cell growth in a WNT5A-dependent manner. Rauf F, Festa F, Park JG, Magee M, Eaton S, Rinaldi C, Betanzos CM, Gonzalez-Malerva L, LaBaer J. *Oncogene*. 37(17):2237-2250 (2018)

2. Discovery of biomarkers and predictive modeling

- Developing human radiation biodosimetry models: Testing cross-species conversion approaches using an ex vivo model system. Park JG, Paul S, Zeng J, Gillis K, Wallstrom G, LaBaer J, Amundson SA. *Radiat Res* 187 (6):708 (2017)
- Comparative Study of Autoantibody Responses between Lung Adenocarcinoma and Benign Pulmonary Nodules. Wang J, Shivakumar S, Barker K, Tang Y, Wallstrom G, Park JG, Tsay JC, Pass HI, Rom WN, LaBaer J, Qiu J. *J Thorac Oncol*. 11(3):334-45 (2016)
- Immunoproteomic Profiling of Antiviral Antibodies in New-Onset Type 1 Diabetes Using Protein Array. Bian X, Wallstrom G, Davis A, Wang J, Park J, Throop A, Steel J, Yu X, Wasserfall C, Schatz D, Atkinson M, Qiu J, LaBaer J. *Diabetes*. 65(1):285 (2016)
- Autoantibody signature for the serologic detection of ovarian cancer. Anderson KS, Cramer DW, Sibani S, Wallstrom G, Wong J, Park JG, Qiu J, Vitonis A, LaBaer J. *J Proteome Res*. 14(1):578-86 (2015)

3. Discovery of functional interaction networks

- Copper-catalyzed azide-alkyne cycloaddition (click chemistry)-based detection of global pathogen-host AMPylation on self-assembled human protein microarrays. Yu X, Woolery AR, Luong P, Hao YH, Grammel M, Westcott N, Park JG, Wang J, Bian X, Demirkan G, Hang HC, Orth K, LaBaer J. *Mol Cell Proteomics*. 13(11):3164-76 (2014)
- Exploration of panviral proteome: high-throughput cloning and functional implications in virus-host interactions. Yu X, Bian X, Throop A, Song L, Moral LD, Park JG, Seiler C, Fiacco M, Steel J, Hunter P, Saul J, Wang J, Qiu J, Pipas JM, LaBaer J. *Theranostics*. 4(8):808-22 (2014)
- Eukaryotic protein domains as functional units of cellular evolution. Jin J, Xie X, Chen C, Park JG, Stark C, James DA, Olhovskii M, Linding R, Mao Y, Pawson T. *Science Signaling* 2(98):ra76 (2009)
- Mouse Piwi interactome identifies binding mechanism of Tdrkh Tudor domain to arginine methylated Miwi. Chen C, Jin J, James DA, Adams-Cioaba MA, Park JG, Guo Y, Tenaglia E, Xu C, Gish G, Jinrong Min J, Pawson T. *PNAS* 106(48):20336-41 (2009)

4. Generation of gene collection for systems-level research on human diseases

- The ORFeome Collaboration: a genome-scale human ORF-clone resource. ORFeome Collaboration. *Nat Methods*. 13(3):191-2 (2016)
- *In vitro* transcription/translation system: A versatile tool in the search for missing proteins. Horvatovich P, Végvári Á, Saul J, Park JG, Qiu J, Syring M, Pirrotte P, Petritis K, Tegeler TJ, Aziz M, Fuentes M, Diez P, Gonzalez-Gonzalez M, Ibarrola N, Droste C, De Las Rivas J, Gil C, Clemente F, Hernaez ML, Corrales FJ, Nilsson CL, Berven FS, Bischoff R, Fehniger TE, LaBaer J, Marko-Varga G. *J Proteome Res*. 14(9):3441-51 (2015)
- DNASU plasmid and PSI: Biology-Materials repositories: resources to accelerate biological research. Seiler CY, Park JG, Sharma A, Hunter P, Surapaneni P, Sedillo C, Field J, Algar R, Price A, Steel J, Throop A, Fiacco M, LaBaer J. *Nucleic Acids Res*. 42(Database issue):D1253-60 (2014)

Patents

- **Plasma autoantibody biomarkers for diagnosis of lung cancer.** Publication number: 20190004051. Joshua LaBaer, Ji Qiu, Jie Wang, Garrick Wallstrom, Jin Park, William Rom, Harvey Pass (2017)
- **ERBB4 inhibitors and methods of use thereof.** Patent number: 10045990. Fernanda Festa, Joshua LaBaer, Jin Park, Femina Rauf (2016)
- **Radiation biodosimetry systems.** Patent number: 10435747. Joshua LaBaer, Kristin Gillis, Garrick Wallstrom, Jin Park, Vel Murugan, Mitch Magee (2015)
- **Microbiome markers and therapies for autism spectrum disorders.** Rosa Krajmalnik-Brown, Dae-Wook Kang, Jin Park, Joshua LaBaer, Zehra Ilhan (2015)

- **Plasma autoantibody biomarkers for basal like breast cancer.** Publication number: WO2016094558A1. Joshua LaBaer, Jie Wang, Ji Qiu, Garrick Wallstrom, Karen Anderson, Jin Park, Jonine Figueroa (2015)

Awards, Fellowships and Scholarships

- 2005-2008 Canadian Institute of Health Research (CIHR) postdoctoral fellowship
- 2002 Fellowship award for scientific excellence, Worcester Foundation by Fairlawn