

BIOGRAPHICAL SKETCH

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NAME Joh, Joongho		POSITION TITLE Instructor	
eRA COMMONS USER NAME (credential, e.g., agency login) j0joh001			
EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable.)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	MM/YY	FIELD OF STUDY
Konkuk University, South Korea	BSc	02/1998	Biochemistry
Konkuk University, South Korea	MSc	08/2000	Biochemistry and Genetics
Konkuk University, South Korea	PhD	02/2005	Biochemistry and Microbiology
Konkuk University, South Korea	Postdoctoral	12/2005	Biomedical Chemistry
University of Louisville, Kentucky	Postdoctoral	12/2010	Cancer Virology and Vaccinology

A. Personal Statement

The objective of my research is to develop the cancer preventive and therapeutic strategies at early stage of human papillomavirus (PV)-induced cancers, which make up 5% of all solid tissue cancers. Recently, I have developed a reliable tumor regression model using newly isolated mouse PV (MmuPV1). In this model, T lymphocyte-mediated tumor regression undergoes, and my current research focuses on identification of effective molecular immune mechanism and cytotoxic effectors and to find an efficient strategy to prevent and treat human cancers. I have a broad background in biochemistry and microbiology with advanced genetic engineering skills. In my early career, I have studied fungal genetics and have 10 peer-reviewed publications. During the studies I constructed and managed a database that provides a wide range of genomic and transcriptional information about various edible mushrooms. During the study, I expanded my research to transcriptional and translational regulations of functional genes and proteins in animals, and I believed that these works contributed to improve cow strains, so that it have been filed up a Korean patent and published five manuscripts on related studies. After joining in a postdoctoral program at JG Brown Cancer Center, my projects have focused on novel virus identifications and vaccine developments against human and animal diseases. I have isolated various novel viruses (7 differently typed mouse parvoviruses, 4 PVs from monkey, mouse and manatee) and developed vaccines against the virus-induced diseases for the animals including endangered species (Snow leopard and Manatee). During the time, I have also been involved in cancer research to detect oncogenic viruses (HPV, and Merkel cell polyomavirus) from human lung and head and neck cancers. Expertise in virology field led me to recently identify the first mouse PV that infects laboratory mice and induces four differently typed tumors in mice. My wide range of experience in animal and microbial genetics, virology, vaccinology, immunology, pathology, and cancer biology has provided me the necessary experience to successfully complete the current projects that develop the efficient preventive and therapeutic strategies for human cancers.

B. Positions and Honors**Positions and Employment**

2011-present: Instructor, JG Brown Cancer Center, Dept. of Medicine, University of Louisville, Louisville, KY
 2008-2010: Postdoctoral Associate, JG Brown Cancer Center, Louisville, KY
 2006-2008: Postdoctoral Fellow, JG Brown Cancer Center, Louisville, KY
 2005-2005: Research Associate, Dept. of Applied Biochemistry, Konkuk University, South Korea
 2002-2005: Research assistant, Dept. of Applied Biochemistry, Konkuk University, South Korea
 2001-2002: Research assistant, National Institute of Agricultural Science and Technology, South Korea
 2000-2001: Teaching Assistant, Dept. of Biochemistry, Konkuk University, South Korea

Awards and Professional Honors

2011 Young faculty Investigator Award, Research Louisville 2011

Other Experience and Professional Memberships

Invited speaker, International Conference on Vaccines and Vaccination, Las Vegas, NV (2013), "Correct L1 initiation codon to generate immunologically reactive virus-like particles of a novel laboratory mouse papillomavirus (MusPV)"

Invited speaker, International Symposium and Annual meeting of The Korean Society for Microbiology and Biotechnology, Korea (2012), "Cutaneous Papillomatosis and Basal Cell Carcinoma caused by a Novel Laboratory Mouse Papillomavirus (MusPV) Infection"

Invited speaker, Konkuk University, Korea (2012), "The first cancer vaccine and mouse papillomavirus"

Invited speaker, National Academy of Agricultural Science, Korea (2008), "Animal papillomavirus and Mouse parvovirus"

Invited speaker, Konkuk University, Korea (2008), "Animal vaccine development and papillomavirus infections"

Member, Korean Society of Mycology, 2000-present

Member, Korean Society for Microbiology and Biotechnology, 2000-present

Member, American Association for Laboratory Animal Science, 2009-present

Member, Korean American Scientists and Engineers Association, 2010-present

PUBLICATIONS:

Articles Published in Peer-Reviewed Journals: (Selected from 29 peer-reviewed publications)

1. Sundberg JP, Stearns TM, **Joh J**, Proctor M, Ingle A, Silva KA, Dadras SS, Jenson AB, Ghim SJ. Immune status, strain background, and anatomic site of inoculation affect mouse papillomavirus (MmuPV1) induction of exophytic papillomas or endophytic trichoblastomas. PLoS ONE 9(12): e113582. doi:10.1371/journal.pone.0113582
2. Ghim SJ, **Joh J**, Giannoni AA, Guzmán AL, Matos L, Guerrero MM, Villanueva M, Jenson AB, Bossart GD. Genital Papillomatosis Associated with Two Novel Mucosotropic Papillomaviruses from a Florida manatee (*Trichechus manatus latirostris*). Aquatic Mammals 2014, 40:195-200.
3. **Joh J**, Proctor ML, Ditslear JL, King WW, Sundberg JP, Jenson AB, Ghim S. Epidemiological and phylogenetic analysis of institutional mouse parvoviruses. Exp Mol Pathol. 2013, 95(1):32-37. PMID: 23545399
4. Storey R, **Joh J**, Jenson AB, Ghim S, Kloecker GH. Detection of Immunoglobulin G against E7 of Human Papillomavirus in non-small cell lung cancer. J Oncol 2013, 2013:240164. PMID: 23533408, PMCID: PMC3603668
5. **Joh J**, Park Y, Son E, Yoon D, Kwon O, Han W, Nam J, Lee C. Isolation and characterization of differentially expressed genes in the mycelium and fruit body of *Pleurotus ostreatus*. African J Biotech 2013, 12:3790-6.
6. **Joh J**, Jenson AB, Proctor ML, Ingle A, Silva KA, Potter CS, Sundberg JP, Ghim S. Molecular diagnosis of a laboratory mouse papillomavirus (MusPV). Exp Mol Pathol. 2012, 93(3):416-21. PMID: 22796029
7. **Joh J**, Jenson AB, King WW, Proctor ML, Ingle A, Sundberg JP, Ghim S. Genomic analysis of the first laboratory-mouse papillomavirus. J Gen Virol 2011, 92(3):692-698. PMID: 21084500

8. Ingle A, Ghim S, **Joh J**, Chepkoech I, Jenson AB, Sundberg JP. Novel Laboratory Mouse Papillomavirus (MusPV) Infection. **Vet Pathol** 2011, **48(2):500-505**. PMID: 20685915
9. **Joh J**, Jenson AB, Moore GD, Rezazadeh A, Slone SP, Ghim S, Kloecker GH. Human Papillomavirus (HPV) and Merkel cell polyomavirus (MCPyV) in Non Small Cell Lung Cancer. *Exp Mol Pathol* 2010, **89(3):222-226**. PMID: 20699096
10. Lee S*, **Joh J***, Lee J, Yoo Y, Lee C, Kim B (*equal contribution). Isolation of genes specifically expressed in different developmental stages of *Pleurotus ostreatus* using microarray analysis. *Mycobiology* 2009, **37(3): 230-237**. PMID: 23983539, PMCID: PMC3749394
11. **Joh J**, Hopper K, Doorslaer KV, Sundberg JP, Jenson AB, Ghim S. The *Macaca fascicularis* papillomavirus type 1 (MfPV-1): a nonhuman primate betapapillomavirus causing rapidly progressive hand and foot papillomatosis. *J Gen Virol* 2009, **90:987-994**. PMID: 19264664
12. **Joh J**, Kim K, Lim J, Son E, Park H, Park Y, Youn W, Kong W, Yoo Y, Lee C. Comparative Analysis of Expressed Sequence Tags from *Flammulina velutipes* at Different Developmental Stages. *J Microbiol Biotechnol* 2009, **19(8), 774-780**. PMID: 19734714
13. Cho Y, Weon H, **Joh J**, Lim J, Kim K, Son E, Lee C, Cho B. Effect of casing layer on growth promotion of the edible mushroom *Pleurotus ostreatus*. *Mycobiology* 2008, **36(1): 40-44**. PMID: 23997606, PMCID: PMC3755250
14. **Joh J**, Lee S, Lee J, Kim K, Jeong S, Youn W, Kim N, Son E, Cho Y, Yoo Y, Lee C, Kim B. Isolation of genes expressed during the developmental stages of the oyster mushroom, *Pleurotus ostreatus*, using expressed sequence tags. *FEMS Microbiol Lett* 2007, **276(1):19-25**. PMID: 17937661
15. Kim N, **Joh J**, Park H, Kim O, Park B, Lee C. Differential expression profiling of the proteomes and their mRNAs in porcine white and red skeletal muscles. *Proteomics* 2004, **4(11):3422-3428**. PMID: 15449374

RESEARCH SUPPORTS

On-going Research Support

University of Louisville School of Medicine - Basic

PI: Joongho Joh, PhD, 12/1/14-11/30/15

Co-I: Alfred B. Jenson, MD; Paula M Chilton, PhD

Title: Isolation of effective antigens and lymphocytes on tumor regression

Description: The objective of this project is to identify effective immunotherapeutic strategy for HPV-induced cancer using the MmuPV1-induced cancer model.

Pending Research Support

Elsa U Pardee Foundation - Research grants

PI: Joongho Joh, PhD, 7/1/15-6/30/17

Co-I: Alfred B. Jenson, MD; Paula M Chilton, PhD

Title: Effective therapeutic strategy on papillomavirus-induced cancer

Description: The objective of this project is to identify an effective therapeutic strategy for HPV-induced cancer using the MmuPV1-induced cancer model.

Completed Research Support

Program Director/Principal Investigator (Last, First, Middle): Joh, Joongho

Gift Fund for Translational Research, PI: A.B. Jenson, MD, 06/01/11-12/31/14

Development of preventive vaccines and therapeutic treatment in a mouse PV model, Role: **Co-Principle investigator**

University of Louisville, Clinical Translational Sciences Program, PI: A.B. Jenson, MD, 06/01/10-05/31/11

Development of a novel laboratory mouse papillomavirus animal model for preventive vaccines, Role: **Investigator**

University of Louisville, Proof of Concept Grant, PI: Shinje Ghim, 06/30/07-06/30/08

Virus like particles of mouse parvoviruses as effective vaccine and as serological reagent against mouse parvoviruses, Role: **Investigator**