Yoshihiro Izumiya, Ph.D.

Clinical Interests Our research focuses on both breast cancer biology and herpesvirus virology. We study epigenetic gene regulation of herpesvirus reactivation. Dynamics of local histone movement along with viral reactivation is used as a model. We apply the reactivation system to understand fundamental relationship between gene expression and local histone modification.

Title Assistant Professor

Specialty Cancer

Department Dermatology

Division Dermatology

Languages Japanese

Education Ph.D., University of Tokyo, Tokyo, 2001
D.V.M., Kitasato University, Aomori, 1997

Professional Memberships American Society of Microbiology
Japanese Society of Veterinary Medicine

Honors and Awards First Place Poster Award at UCD Cancer Center Symposium, 2011
Universitywide AIDS Research Program Postdoctoral Fellowship Awards, 2005
Award of Excellence in Postdoctoral Research at UC Davis, 2005
Plenary Holors japanese Veterinary Medical Science, 2003
Uehara Memorial Postdoctoral Fellowship, 2002
Research Fellowships for Young Scientists of the Japan Society for Promotion of Science, 2001

Select Recent Publications

Campbell M, Izumiya Y. Post-Translational Modifications of Kaposi's Sarcoma-Associated Herpesvirus Regulatory Proteins - SUMO and KSHV. Front Microbiol. 2012;3:31. Epub 2012 Feb 14.

Chang PC, Fitzgerald LD, Hsia DA, Izumiya Y, Wu CY, Hsieh WP, Lin SF, Campbell M, Lam KS, Luciw PA, Tepper CG, Kung HJ. Histone demethylase JMJD2A regulates Kaposi's sarcoma-associated herpesvirus replication and is targeted by a viral transcriptional factor. J Virol. 2011 Apr; 85(7):3283-93. Epub 2011 Jan 12.

Campbell M, Chang PC, Huerta S, Izumiya C, Davis R, Tepper CG, Kim KY, Shevchenko B, Wang DH, Jung JU, Luciw PA, Kung HJ, Izumiya Y. Protein Arginine Methyltransferase 1-directed

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Methylation of Kaposi Sarcoma-associated Herpesvirus Latency-associated Nuclear Antigen. J Biol Chem. 2012 Feb 17;287(8):5806-18. Epub 2011 Dec 16.

Chang PC, Izumiya Y, Wu CY, Fitzgerald LD, Campbell M, Ellison TJ, Lam KS, Luciw PA, Kung HJ. Kaposi's sarcoma-associated herpesvirus (KSHV) encodes a SUMO E3 ligase that is SIM-dependent and SUMO-2/3-specific. J Biol Chem. 2010 Feb 19;285(8):5266-73. Epub 2009 Dec 24.

Suchodolski PF, Izumiya Y, Lupiani B, Ajithdoss DK, Lee LF, Kung HJ, Reddy SM.Both homo and heterodimers of Marek's disease virus encoded Meq protein contribute to transformation of lymphocytes in chickens. Virology. 2010 Apr 10;399(2):312-21. Epub 2010 Feb 4.

Hsia DA, Tepper CG, Pochampalli MR, Hsia EY, Izumiya C, Huerta SB, Wright ME, Chen HW, Kung HJ, Izumiya Y. KDM8, a H3K36me2 histone demethylase that acts in the cyclin A1 coding region to regulate cancer cell proliferation. Proc Natl Acad Sci U S A. 2010 May 25;107(21):9671-6. Epub 2010 May 10.

Izumiya Y, Izumiya C, Hsia D, Ellison TJ, Luciw PA, Kung HJ. NF-kappaB serves as a cellular sensor of Kaposi's sarcoma-associated herpesvirus latency and negatively regulates K-Rta by antagonizing the RBP-Jkappa coactivator. J Virol. 2009 May;83(9):4435-46. Epub 2009 Feb 25.

Suchodolski PF, Izumiya Y, Lupiani B, Ajithdoss DK, Gilad O, Lee LF, Kung HJ, Reddy SM. Homodimerization of Marek's disease virus-encoded Meq protein is not sufficient for transformation of lymphocytes in chickens. J Virol. 2009 Jan;83(2):859-69. Epub 2008 Oct 29.

Ellison TJ, Izumiya Y, Izumiya C, Luciw PA, Kung HJ. A comprehensive analysis of recruitment and transactivation potential of K-Rta and K-bZIP during reactivation of Kaposi's sarcoma-associated herpesvirus. Virology. 2009 Apr 25;387(1):76-88. Epub 2009 Mar 9.

Chang PC, Fitzgerald LD, Van Geelen A, Izumiya Y, Ellison TJ, Wang DH, Ann DK, Luciw PA, Kung HJ. Kruppel-associated box domain-associated protein-1 as a latency regulator for Kaposi's sarcoma-associated herpesvirus and its modulation by the viral protein kinase. Cancer Res. 2009 Jul 15;69(14):5681-9. Epub 2009 Jul7.