

Shannon Celeste Kenney

PERSONAL INFORMATION

(608)265-0535 (work)
Email: skenney@wisc.edu

Marital Status: Married
Four children

EDUCATION

College: Yale University
New Haven, Connecticut
September, 1972 - May, 1975
B.A. - Geology - awarded Magna Cum Laude

Medical School: Yale University School of Medicine
New Haven, Connecticut
September, 1975 - May, 1979
M.D. degree (Awarded as candidate for highest academic honors)

Residency: University of North Carolina Hospitals
Medicine/Pediatrics (4 year program)
July, 1979- June, 1983

Research Fellowship: Laboratory of Biology of Viruses
National Institute of Allergy and Infectious Diseases, NIH
July, 1983- June, 1985

Infectious Diseases Fellowship: University of North Carolina Hospitals
July, 1985-July, 1987

EMPLOYMENT HISTORY

2006-present Wattawa Bascom Professor of Cancer Research, Departments of Oncology and Medicine, University of Wisconsin School of Medicine and Public Health

2004- 2006 Sarah Graham Kenan Professor of Medicine and Microbiology & Immunology, University of North Carolina School of Medicine, Chapel Hill, N.C.

1998-2006 Professor of Medicine (Division of Infectious Diseases) and Microbiology & Immunology, University of North Carolina School of Medicine, Chapel Hill, N.C.

1993 - 1998 Associate Professor (with tenure) of Medicine (Division of Infectious Diseases) and Microbiology & Immunology, University of North Carolina School of Medicine, Chapel Hill, N.C.

1987 - 1993 Assistant Professor of Medicine (Division of Infectious Diseases) and Microbiology & Immunology, University of North Carolina School of Medicine, Chapel Hill, N.C.

1987 – 2006 Research Scientist, Lineberger Comprehensive Cancer Center, University of
North Carolina School of Medicine, Chapel Hill, N.C.

CERTIFICATION/LICENSURE

National Board of Medical Examiners (Diplomat) (1979)
Board-certified in Internal Medicine (1983)
Board-certified in Pediatrics (1986)
Board-certified in Infectious Diseases (1990; recertified 2005)
Licensed to practice medicine in North Carolina and Wisconsin

PROFESSIONAL SOCIETIES

Fellow, Infectious Diseases Society of America
Member, American Society of Virology
Member, American Society for Clinical Investigation
Member, Association of American Physicians
Member, American Clinical and Climatological Association
Editorial Board, Journal of Virology

HONORS AND AWARDS:

B.A. Awarded Magna Cum Laude
M.D. Degree Awarded Candidate for Highest Honors
Student Editor of Yale Journal of Biology and Medicine 1976-79
Jefferson-Pilot Blake Newton Award, 1986
Jefferson-Pilot Fellowship in Academic Medicine, 1989 - 1991
NIH Research Career Development Award, 1992 - 1997
Elected to the American Society for Clinical Investigation, 1995
Ruth Hettleman Prize for Creativity in the Arts and Sciences, 1996
Member, NIH Study Section (AIDS-Related Research), 1996-2003
Member, IDSA Program Planning Committee, 1997-1999
Sarah Graham Kenan Professorship, 2004 – 2006
Board Member, International Epstein-Barr virus Association, 2005-present
Elected to the Association of American Physicians, 2005
Elected to the American Clinical and Climatological Association, 2005
Member, Burroughs Wellcome Fund's scientific advisory committee for the Clinical Scientists Awards
in Translational Research, 2005-present.
Woodward Prize, American Clinical and Climatological Association, 2005
Editorial Board, Journal of Virology
University of Wisconsin Department of Medicine Rankin Research Award, October 2007
Invited Landes-Merrimon Lecturer, University of North Carolina School of Medicine Student Research
Day, January 2013
Invited Plenary Speaker, ASCI/AAP meeting, Chicago, April 2013
Invited Plenary Speaker, International Herpesvirus meeting, July 2013
Invited Plenary Speaker, NIH Norman Salzman Symposium, November 2014

Invited Plenary Speaker, CROI meeting, February 2015

GRANTS FUNDED (Active Support only)

1) Epigenetic determinants of Epstein-Barr virus and cellular DNA in oral diseases

NIH 5-R01-DE023939

a) co-PIs: Eric Johannsen and Shannon Kenney

b) 9/20/13 through 7/31/18

c) \$392, 688 direct support current year

2) Molecular Biology and genetics of Human Tumor Viruses

NIH P01 CA022443

a) PI Dr. Bill Sugden (Dr. Kenney is co-leader of Projects 4 and 5)

b) 5/1/08 through 4/30/13 (renewed starting 5/1/13 through 4/30/18)

c) \$200,000 per year direct support for Dr. Kenney's Laboratory

3) New Models and Treatment for AIDS-related Lymphomas

1R01CA174462

a) PI Dr. Shannon Kenney

b) 5/1/2013 to 4/30/2018

c) \$300,00 per year direct support for Dr. Kenney's Laboratory

4) Development of a Novel Inducer for EBV Lytic Therapy

NIH R01 CA193624

a) Multi-PIs: Drs. Paul Lieberman, Joseph Salvino, and Shannon Kenney, PIs

b) 04/01/2015 – 03/31/2018

c) \$180,000 per year direct support to Dr. Kenney's Laboratory

PUBLICATIONS

Refereed Journals

- 1 **Kenney, S.**, Natarajan, V., Strike, D., Khoury, G., and Salzman, N. JC virus enhancer-promoter active in human brain cells. *Science* 226:1337-1339, 1984.
2. Santamaria, J., **Kenney, S.**, and Stiles, A. Purpura Fulminans associated with Haemophilus Influenza type B infection. *North Carolina Medical Journal* 46:516-517, 1985.
3. **Kenney, S.**, Natarajan, V., Selzer, G., and Salzman, N. Mapping 5' termini of JCV Late mRNA. *J. Virology* 58:216-219, 1986.
4. **Kenney, S.**, Natarajan, V., Selzer, G., and Salzman, N. Mapping 5' termini of JCV early mRNA. *J. Virology* 58:651-654, 1986.
5. Davis, M.G., **Kenney, S.**, Kamine, J., Pagano, J.S., and Huang, E.S. A major Immediate-early gene of human cytomegalovirus transactivates the promoter of human T-cell leukemia virus, Type III. *Proc. Natl. Acad. Sci. U.S.A.* 84:8642-8646, 1987.

6. **Kenney, S.**, Kamine, J., Markovitz, D., Fenrick, R., and Pagano, J. An EBV immediate-early gene product transactivates gene expression from the Human Immunodeficiency Virus long terminal repeat. *Proc. Natl. Acad. Sci. U.S.A.* 85:1652-1656, 1988.
7. Pagano, J., **Kenney, S.**, Markovitz, D., and Kamine, J. Epstein-Barr Virus and Interactions with Human Retroviruses. *Journal of Virological Methods* 21:229-239, 1988.
8. **Kenney, S.**, Kamine, J., Holley-Guthrie, E., Lin, J.-C., Mar, E.C., and Pagano, J.S. The EBV BZLF1 Immediate-early gene product differentially affects latent versus productive EBV promoters. *J. Virology* 63:1729-1736, 1989.
9. **Kenney, S.**, Kamine, J., Holley-Guthrie, E., Markovitz, D., and Pagano, J.S. The EBV immediate-early gene product, BMLF1, transactivates by a post-transcriptional mechanism which is reporter-gene dependent. *J. Virology* 63:3870-3877, 1989.
10. **Kenney, S.**, Holley-Guthrie, E., and Mar, E.C. The EBV BMLF1 promoter contains an enhancer element responsive to the BZLF1 and BRLF1 transactivators. *J. Virology* 63:3878-3883, 1989.
11. Markovitz, D., **Kenney, S.**, Kamine, J., Smith, M., Baber, B., Fenrick, R., Huang, E.-S., Rosen, C., Haseltine, W., and Pagano, J.S. Disparate effects of two herpesvirus Immediate-early gene trans-activators on the HIV-1 LTR. *Virology* 173:750, 1989.
12. Quinlivan, E.B., Holley-Guthrie, E., Mar, E.-C., Smith, M. and **Kenney, S.C.** The EBV BRLF1 immediate-early gene product transactivates the HIV1-LTR by a mechanism which is enhancer-dependent. *J. Virol.* 64:1817-1820, 1990.
13. Holley-Guthrie, E., Quinlivan, E.B., Mar, E.-C., and **Kenney, S.C.** The Epstein-Barr Virus (EBV) is regulated by the EBV Transactivators, BRLF1 and BZLF1, in a cell-specific manner. *J. Virol.* 64:3753-3759, 1990.
14. Sung, N., **Kenney, S.**, Gutsch, D., and Pagano, J. EBNA2 transactivates a lymphoid-specific enhancer in the BAMHI-C promoter of the Epstein-Barr Virus. *J. Virol.* 65:2164-2169, 1991.
15. **Kenney, S.C.**, Holley-Guthrie, E., Gutsch, D., Bender, T., Giot, J. and Sergeant, A. The cellular oncogene, c-myc, can interact synergistically with BZLF1 in lymphoid cells. *Mol. Cell. Biol.* 12:136-146, 1992.
16. Shapiro, D., **Kenney, S.**, Johnson, M., and Wyrick, P. Chlamydia Psittici Endocarditis Diagnosed by Positive Culture from Blood. *N. Engl. J. of Med.* 326:1192-1195, 1992.
17. Quinlivan, E.B., Norris, M., Bouldin, T., Suzuki, K., Meeter, R., Smith, M., Hall, C., and **Kenney, S.** Subclinical central nervous system infection with JC virus in patients with AIDS. *J. Infect. Dis.* 166:80-85, 1992.
18. Zalani, S., Holley-Guthrie, E., Gutsch, D., and **Kenney, S.** The Epstein-Barr virus (EBV) immediate-early promoter, BRLF1, can be activated by the cellular Sp1 transcription factor. *J. Virol.* 66:7282-7292, 1992.
19. Sista, N., Pagano, J., Liao, W., and **Kenney, S.** Retinoic acid is a negative regulator of the Epstein-Barr virus protein (BZLF1) that mediates disruption of latent infection. *Proc. Natl. Acad. Sci.* 90:3894-3898, 1993.
20. Quinlivan, E.B., Holley-Guthrie, E., Norris, M., Gutsch, D., Bachenheimer, S., and **Kenney, S.** Direct BRLF1 binding is required for cooperative BZLF1/BRLF1 activation of the Epstein-Barr virus early gene promoter, BMRF1. *Nucleic Acids Res.* 21:1999-2007, 1993 (erratum NAR 21:3340).
21. Gutsch, D., Holley-Guthrie, E., Zhang, Q., Stein, B., Blonar, M., Baldwin, A., and **Kenney, S.** The bZIP transactivator, BZLF1, of Epstein-Barr virus functionally and physically interacts with the p65 subunit of NF-KB. *Mol Cell. Biol.* 14:1939-1948, 1994

22. Zhang, Q., Gutsch, D., and **Kenney, S.** Functional and physical interactions between p53 and BZLF1: implications for Epstein-Barr virus latency. *Mol. Cell. Biol.* 14:1929-1938, 1994.
23. Furnari, F., Quinlivan, E.B., **Kenney, S.**, and Pagano, J. RAZ, an Epstein-Barr virus transdominant repressor that modulates the viral reactivation mechanism. *J. Virol.* 68:1827-1836, 1994.
24. Gutsch, D., Marcu, K., and **Kenney, S.** The Epstein-Barr virus BRLF1 gene product transactivates the murine and human c-myc promoters. *Cell. Mol. Biol.* 40:747-760, 1994.
25. **Kenney, S.**, and Pagano, J. Viruses as oncolytic agents: a new age for "therapeutic" viruses? *J. Natl. Cancer Inst.* 86:1185-1186, 1994.
26. Kenney, S. and Zalani, S. Regulation of BZLF1 function by viral and host cell factors. *Epstein-Barr Virus Report* 2:23-28, 1995.
27. Zalani, S., Holley-Guthrie, E., and **Kenney, S.** The Zif268 cellular transcription factor activates expression of the Epstein-Barr virus Immediate-early BRLF1 Promoter. *J. Virol.* 69:3816-3823, 1995.
28. Zhang, Q., Hong, H., Dorski, D., and **Kenney, S.** Functional and physical interactions between the Epstein-Barr virus (EBV) proteins BZLF1 and BMRF1: effects on EBV transcription and lytic replication. *J. Virol.* 70:5131-5142, 1996.
29. Zalani, S., Holley-Guthrie, E. and **Kenney, S.** Epstein-Barr viral latency is disrupted by the Epstein-Barr virus Immediate-early BRLF1 through a cell-specific mechanism. *Proc. Natl. Acad. Sci. USA* 93:9194-9199, 1996.
30. Rogers, R., Ge, J.-Q., Hoganson, D., Comstock, K., Olsen, J. and **Kenney, S.** Killing EBV-positive B lymphocytes by gene therapy: comparing the efficacy of cytosine deaminase and HSV thymidine kinase. *Hum. Gene Ther.* 7:2235-2245, 1996.
31. Zalani, S., Coppage, A., Holley-Guthrie, E., and **Kenney, S.** The cellular YY1 transcription factor binds a cis-acting negatively regulating element in the Epstein-Barr virus BRLF1 promoter. *J. Virol.* 71:3268-3274, 1997.
32. Hong, H., Holley-Guthrie, E. and **Kenney, S.** The bZip dimerization domain of the Epstein-Barr virus BZLF1 protein mediates lymphoid-specific negative regulation. *Virology* 229:36-48, 1997.
33. Zhang, Q., Holley-Guthrie, E., Ge, J.-Q., Dorsky, D. and Kenney, S. The Epstein-Barr virus (EBV) DNA polymerase accessory protein, BMRF1, activates the essential downstream component of the EBV oriLyt. *Virology* 230:24-34, 1997.
34. **Kenney, S.**, Ge, J.-Q., Westphal, E., and J. Olsen. Gene therapy strategies for treating EBV-associated lymphomas: comparison of two different Epstein-Barr virus-based vectors. *Hum. Gene Ther.* 9:1131-1141, 1998.
35. Adamson, A., and **Kenney, S.** Rescue of the Epstein-Barr virus BZLF1 mutant, Z (S186A), early gene activation defect by the BRLF1 gene product. *Virology* 251:187-197, 1998.
36. Zhang, Q., Holley-Guthrie, E., Dorsky, D., and **Kenney, S.** Identification of transactivator and nuclear localization domains in the Epstein-Barr virus (EBV) DNA polymerase accessory protein, BMRF1. *J. Gen. Virol.* 80:69-74, 1999.
37. Westphal, E.-M., Mauser, A., Swenson, J., Davis, M., Talarico, C., and **Kenney, S.** Induction of lytic Epstein-Barr virus (EBV) infection in lymphomas using adenovirus vectors in vivo. *Cancer Res.* 59:1485-1491, 1999.
38. Adamson, A., and **Kenney, S.** The Epstein-Barr virus BZLF1 protein interacts physically and functionally with the Histone Acetylase CREB-binding protein. *J. Virol.* 73:6551-6558, 1999.
39. Swenson, J., Mauser, A., Kaufman, W., and **Kenney, S.** The Epstein-Barr virus protein BRLF1 activates S phase entry through E2F1 induction. *J. Virol.* 73:6540-6550, 1999.

40. Westphal, E. M., Ge, J.-Q., and **Kenney, S.** The CB1954/nitroreductase combination in EBV-positive B cell lines: induction of bystander killing in vitro and in vivo. *Cancer Gene Ther.* 7:97-106, 2000.
41. Adamson, A., Darr, D., Holley-Guthrie, E., Johnson, R., Mauser, A., Swenson, J. and **Kenney, S.** Epstein-Barr virus immediate-early proteins, BZLF1 and BRLF1, activate the ATF2 transcription factor by increasing the levels of phosphorylated p38 and c-jun N-terminal kinases. *J. Virol.* 74:1224-1233, 2000.
42. Westphal, E., Blackstock, W., Feng, W., Israel, B., and **Kenney, S.** Activation of lytic Epstein-Barr virus infection by radiation and sodium butyrate in vitro and in vivo: a potential method for treating EBV-positive malignancies. *Cancer Res.* 60:5781-5788, 2000.
43. Adamson, A., and **Kenney, S.** The Epstein-Barr virus immediate-early protein BZLF1 is Sumo-1 modified and disrupts promyelocytic leukemia (PML) bodies. *J. Virol.* 75:2388-2399, 2001.
44. Swenson, J., Holley-Guthrie, E., and **Kenney, S.** The Epstein-Barr virus immediate-early protein BRLF1 interacts with CBP, promoting enhanced BRLF1 transactivation. *J. Virol.* 75: 6228-6234, 2001.
45. Israel, B., Pickles, R., Segal, D., Gerard, R., and **Kenney, S.** Enhancement of adenoviral vector entry into CD70-positive B cell lines using Bi-specific CD70/adenovirus fiber antibody. *J. Virol.* 75: 5215-5221, 2001.
46. Darr, D., Mauser, A., and **Kenney, S.** The Epstein-Barr virus immediate-early protein, BRLF1, induces the lytic form of viral replication through a mechanism involving phosphatidylinositol 3 (PI3) kinase activation. *J. Virol.* 75: 6135-6142, 2001.
47. Morrison E, Mauser A, Wong A, Ting J, and **Kenney, S.** Inhibition of IFN- γ -signaling by an Epstein-Barr virus immediate-early protein. *Immunity.* 15: 787-99, 2001.
48. Feng W., Israel B., Raab-Traub N., Busson P., **Kenney, S.** Chemotherapy Induces Lytic EBV Replication and Confers Ganciclovir Susceptibility to EBV-positive Epithelial Cell Tumors. *Cancer Res.* 62: 1920-1926, 2002
49. Mauser A, Shin'ichi S, Ettore A, Anderson CW, and **Kenney, S.** The Epstein-Barr Virus Immediate-Early Protein, BZLF1, Regulates p53 Function Through Multiple Mechanisms. *J. Virol.* 76:12503-12512, 2002
50. Mauser A, Holley-Guthrie E, Simpson D, Kaufmann W, and **Kenney, S.** The Epstein-Barr Virus Immediate-Early Protein, BZLF1, Induces Both A G2 and Mitotic Block. *J. Virol.* 76: 10030-10037, 2002.
51. Feng, W. Westphal, E., Raab-Traub, N., Gulley, ML, Busson, P., and **Kenney, S.** The use of Adenovirus Vectors Expressing the Epstein-Barr Virus (EBV) Immediate-Early Proteins BZLF1 and BRLF1 to Treat EBV-Positive Tumors. *J. Virol.* 76:10951-10959, 2002. *
52. Mauser, A., Holley-Guthrie, E., Zanation, A., Yarborough, W., Kaufmann, W., Klingelutz, A., and **Kenney, S.** The Epstein-Barr virus immediate-early protein, BZLF1, induces expression of E2F-1 and other proteins involved in cell cycle progression in primary keratinocytes and gastric carcinoma cells. *J. Virol.* 76:12543-12552, 2002.
53. Israel, B. and **Kenney, S.** Virally targeted therapies for EBV-associated malignancies. *Oncogene* 22:5122-5130, 2003.
54. Morrison, T., Mauser, A., Klingelutz, A., and **Kenney, S.** The Epstein-Barr Virus Immediate-Early Protein BZLF1 Inhibits Tumor Necrosis Factor- α Induced Signaling and Apoptosis By Downregulating Tumor Necrosis Factor Receptor-1. *J. Virol.* 78:544-549, 2004.
55. Feng W., Hong, G., Delecluse, H.-J., and **Kenney, S.** Lytic induction therapy for Epstein-Barr virus-positive B-cell lymphomas. *J. Virol.* 78:1893-1902, 2004.

56. Li, Y., Webster-Cyriaque, Tomlinson, C., Yohe, M., and **Kenney, S.** Fatty acid synthase expression is induced by the Epstein-Barr virus immediate-early protein, BRLF1, and is required for lytic viral gene expression. *J. Virol.* 78:4197-4206, 2004.
57. Hong, G., Delecluse, H.-J., Gruffat, H., Morrison, T., Feng, W., **Kenney, S.** The BRRF1 early gene of Epstein-Barr virus encodes a transcription factor that enhances induction of lytic infection by BRLF1. *J. Virol.* 78:4983-4992, 2004.
58. Morrison, T. and **Kenney, S.** BZLF1, an Epstein-Barr virus immediate-early protein, induces p65 nuclear translocation while inhibiting p65 transcriptional function. *Virology* 328:219-232, 2004.
59. Li, Y., Mahajan, N., Webster-Cyriaque, J., Bhende, P., Earp, H.S., and **Kenney, S.** C-Mer is induced by the Epstein-Barr virus immediate-early protein BRLF1. *J. Virol.* 78:11788-11785, 2004.
60. Makhov, A., Subramanian, D., Holley-Guthrie, E., Kenney, S.C., and Griffith, J. The Epstein-Barr virus polymerase accessory factor, BMRF1, adopts a ring shaped structure as visualized by electron microscopy. *J. Biol. Chem.* 279:40358-40361, 2004.
61. Feng, W., Cohen, J., Fischer, J., Li, L., Sneller, M., Goldbach-Mansky, R., Raab-Traub, N., Delecluse, H.-J., and **Kenney, S.** Methotrexate induces reactivation of latent Epstein-Barr virus: a potential contributor to methotrexate-associated lymphomas. *J. Natl. Cancer Inst.* 96:1691-1702, 2004.
62. Bhende, P., Seaman, W., Delecluse, H.-J., and **Kenney, S.** The EBV lytic switch protein, Z, activates the methylated viral genome through a novel mechanism. *Nat. Gen.* 36:1099-1104, 2004.
63. Holley-Guthrie, E., Seaman, W., Bhende, P., Merchant, J., and **Kenney, S.C.** The Epstein-Barr virus protein, BMRF1, activates gastrin transcription. *J. Virol.* 79:745-55, 2005.
64. Bhende, P., Seaman, T., Delecluse, H.-J., and **Kenney, S.** BZLF1 activation of the methylated form of the BRLF1 immediate-early promoter is regulated by BZLF1 residue 186. *J. Virol.* 79:7338-7348, 2005.
65. Hong, G., Gulley, M., Feng, W.-H., Delecluse, H.-J., Holley-Guthrie, E., and **Kenney, S.** Epstein-Barr virus lytic infection contributes to tumorigenesis in a SCID mouse model of lymphoma. *J. Virol.* 79: 13993-4003, 2005.
66. Hong, G., Kumar, P., Wang, L., Damania, B., Gulley, M., Delecluse, H.-J., Polverini, P., and **Kenney, S.** Epstein-Barr virus lytic infection is required for efficient production of the angiogenesis factor VEGF in lymphoblastoid cell lines. *J. Virol.* 79: 13984-13982, 2005.
67. Israel, B., Feng, W.H., Gulley, P., and **Kenney, S.** Anti-CD70 antibodies: a potential treatment for EBV-positive CD70-expressing lymphomas. *Mol. Cancer Ther.* 4: 2037-44, 2005.
68. Gonzalez, C.M., Wong, E., Bowser, B., Hong, G., **Kenney, S.**, and Damania, B. Identification and characterization of the KSHV ORF49 protein. *J. Virol.* 80:3062-70, 2006.
69. **Kenney, S.** Development of Novel, EBV-targeted therapies for EBV-positive tumors. *Trans. Am. Clin. Climatol. Assoc.* 117:55-73; discussion 73-4, 2006.
70. Feng, W., and **Kenney, S.** Valproic acid enhances the efficacy of chemotherapy in EBV-positive tumors by increasing lytic viral gene expression. *Cancer Res.* 66:8762-8769, 2006.
71. Bhende, P. M., Dickerson, S. J., Sun, X., Feng, W. H., and **Kenney, S. C.** X-box binding protein 1 (XBP-1) activates lytic Epstein-barr virus gene expression in combination with protein kinase D (PKD). *J. Virol.* 81:7363-73-70, 2007.

72. Jones, R., Bhende, P., Jones, D., Delecluse, H. J., and **Kenney, S.** Epstein-Barr virus infection induces retinoic acid-responsive genes through induction of a retinol metabolizing enzyme, DHRS9. *J. Biol. Chem.* 282:8317-24, 2007.
73. Jones, RJ, Seaman, WT, Feng, WH, Barlow, E., Dickerson, S., Delecluse, H.J., and **Kenney, SC.** Roles of lytic viral infection and IL-6 in early versus late passage lymphoblastoid cell lines and EBV-related lymphoproliferative disease. *Intl J. Cancer* 121:1274-1281, 2007.
74. Yu, F., Feng, J., Harada, J., Chanda, S., **Kenney, S.**, and Ren, S. B cell terminal differentiation factor XBP-1 induces reactivation of Kaposi's sarcoma associated herpesvirus. *FEBS Lett.* 581: 3485-3488, 2007.
75. Feng, W. H., Kraus, R. J., Dickerson, S., Lim, H., Jones, R., Yu, Z., Mertz, J. E., and **Kenney, S. C.** Cellular and viral factors contribute to infection by Epstein-Barr virus being highly lytic in gastric AGS cells. *J. Virol.* 81: 10113-10122, 2007.
76. Dickerson, S.J., Xing, Y., Robinson, A., Seaman, W., Gruffat, H., and **Kenney, S.C.** Methylation-dependent binding of the Epstein-Barr virus BZLF1 protein to viral promoters. *PLoS Path. Mar;5(3):e1000356.* Epub 2009 Mar 27, 2009.
77. Ryan, J., Jones, R., Elmore, S., **Kenney, S.**, Miller, G., Schroeder, J., and Gulley, M. Epstein-Barr virus WZhet DNA can induce lytic replication in epithelial cells in vitro, although WZhet is not detectable in many human tissues in vivo. *Intervirolgy*, 52: 8-16, 2009.
78. Bristol, J., Morrison, T., and **Kenney, S.C.** CCAAT/Enhancer Binding Proteins (C/EBPs) alpha and beta regulate the tumor necrosis factor receptor 1 (TNFR1) gene promoter. *Mol. Immunol.* 46:2706-13, 2009.
79. Ryan, J., Shen, Y., Morgan, D., Elmore, S., Thorne, L., Dominguez, R., **Kenney, S.**, and Gulley, M. Epstein-Barr virus infection is common in inflamed gastrointestinal mucosa. *Intervirolgy*. 52(1):8-16. Epub 2009 Apr 7, 2009.
80. Sun X, Barlow EA, Ma S, Hagemeyer SR, Duellman SJ, Burgess RR, Tellam J, Khanna R, **Kenney SC.** Hsp90 inhibitors block outgrowth of EBV-infected malignant cells in vitro and in vivo through an EBNA1-dependent mechanism. *Proc Natl Acad Sci U S A.* Feb 16;107(7):3146-51. Epub 2010 Jan 26, 2010.
- 81.. Sun X, **Kenney SC.** Hsp90 inhibitors: a potential treatment for latent EBV infection? *Cell Cycle.* May;9(9):1665-6. Epub 2010 May 19, 2010.
82. Tang W, Harmon P, Gulley ML, Mwansambo C, Kazembe PN, Martinson F, Wokocho C, **Kenney SC,** Hoffman I, Sigel C, Maygarden S, Hoffman M, Shores C. Viral response to chemotherapy in endemic burkitt lymphoma. *Clin. Cancer Res.* Apr 1;16(7):2055-64. Epub 2010 Mar 16., 2010.
83. Hagemeyer SR, Dickerson SJ, Meng Q, Yu X, Mertz JE, **Kenney SC.** Sumoylation of the Epstein-Barr virus BZLF1 protein inhibits its transcriptional activity and is regulated by the virus-encoded protein kinase. *J Virol.* May;84(9):4383-94. Epub 2010 Feb 24, 2010.
84. Meng Q, Hagemeyer SR, Fingerroth JD, Gershburg E, Pagano JS, **Kenney SC.** The Epstein-Barr virus (EBV)-encoded protein kinase, EBV-PK, but not the thymidine kinase (EBV-TK), is required for ganciclovir and acyclovir inhibition of lytic viral production. *J Virol.* May;84(9): 4534-42. Epub 2010 Feb 24, 2010.
85. Meng Q, Hagemeyer SR, Kuny CV, Kalejta RF, **Kenney SC.** Simian virus 40 T/t antigens and lamin A/C small interfering RNA rescue the phenotype of an Epstein-Barr virus protein kinase (BGLF4) mutant. *J Virol.* May;84(9):4524-33. Epub 2010 Feb 10, 2010.
86. Ma SD, Hegde S, Young KH, Sullivan R, Rajesh D, Zhou Y, Jankowska-Gan E, Burlingham WJ, Sun X, Gulley ML, Tang W, Gumperz JE, **Kenney SC.**A new model of epstein-barr virus

- infection reveals an important role for early lytic viral protein expression in the development of lymphomas. *J Virol.* Jan;85(1):165-77. Epub 2010 Oct 27, 2011.
87. Ryan JL, Jones RJ, **Kenney SC**, Rivenbark AG, Tang W, Knight ERW, Coleman WB, Gulley ML: Epstein-Barr Virus-Specific Methylation of Human Genes in Gastric Cancer Cells. *Infect. Agents Cancer*, Dec 31;5:27, 2010.
 88. Bristol JA, Robinson AR, Barlow EA, **Kenney SC**. The Epstein-Barr virus BZLF1 protein inhibits tumor necrosis factor receptor 1 expression through effects on cellular C/EBP proteins. *J Virol.* Dec;84(23):12362-74. Epub 2010 Sep 22, 2010.
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108. Wille, C.K., Nawandar, D.M., Henning, A.N., Ma,S., Oetting, K.M., Lee, D., Lambert, P.F., Johannsen, E.C., and **Kenney, S.C.** 5-hydroxymethylation of the EBV genome regulates the latent to lytic switch. In revision, *Proc. Natl. Acad. Sci.* 109.
109. Ma, S., Xu, X., Jones, R., Delecluse, H.-J., Gumperz, J.E., and S.C. Kenney. PD-1/CTLA-4 blockade inhibits Epstein-Barr virus-induced lymphoma growth in a cord blood humanized-mouse model. Submitted, *PLOS Pathogens*.

Invited papers published in conference proceedings

1. **Kenney, S.**, Lin, J.C. and Pagano, J.S. Transactivation of an EBV promoter within the IR-1 region of the genome. In: Epstein-Barr Virus and Human Disease (Ablashi, D., Faggioni, A., Nonoyama, M., Pearson, G.R., and Glaser, R., eds.). Humana Press, Clifton, New Jersey. pp. 25-30, 1987.
2. **Kenney, S.**, Kamine, J., Holley-Guthrie, E., and Lin, J. Effect of the BZLF1 Transactivator on Different Classes of EBV Promoters. In: Epstein-Barr Virus and Human Disease, (Ablashi, D., Faggioni, G., Krueger, G., Pagano, J., and Pearson, G., eds.). Humana Press, Clifton, New Jersey, pp. 55-60, 1989.
3. Lin, J.-C., **Kenney, S.**, and Pagano, J.S. Detection of proteins binding to the EBNA 2 promoter. In: Epstein-Barr Virus and Human Diseases, (Ablashi, D., Faggioni, G., Krueger, G., Pagano, J., and Glaser, R., eds). Humana Press, Clifton, New Jersey, pp. 105-112, 1989.
4. **Kenney, S.**, Holley-Guthrie, E., Gutsch, D., Giot, J. and Sergeant, A. The EBV BRLF1 protein has sequence and functional similarity with the c-myc proto-oncogene. In: Epstein-Barr Virus and Human Disease (Ablashi, D., Huang, A., Pagano, J., Pearson, G., and Yang, C., eds.). Humana press, Clifton, New Jersey, pp. 93-97, 1991.
5. Sung, N., **Kenney, S.**, and Pagano, J. A new lymphoid specific EBV enhancer is transactivated by EBNA-2. In: Epstein-Barr Virus and Human Disease, (Ablashi, D., Huang, A., Pagano, J., Pearson, G., and Yang, C., eds.). Humana Press, Clifton, New Jersey, pp. 53-57, 1991.
6. **Kenney, S.**, Zalani, S, Zhang, Q., Gutsch, D., and Holley-Guthrie, E. The regulation of the Z transactivator function by cellular proteins. In: Epstein-Barr virus and Human Disease (Ablashi, D., Huang, A., Pagano, J., Pearson, G., and Yang, C., eds.). Humana press, Clifton, New Jersey. 1993.
7. Sista, N., **Kenney, S.**, Liao, W., and Pagano, J. Retinoic acid is a negative regulator of BZLF1-mediated gene expression. In: Epstein-Barr Virus and Human Disease (Ablashi, D., Huang, A., Pagano, J., Pearson, G., and Yang, C., eds.). Humana Press, Clifton, New Jersey. 1993.

Chapters in books

1. Raab-Traub, N. and **Kenney, S.** Epstein-Barr virus: Pathogenesis and treatment. In: *Viral Infections and Treatment* (Marcel Dekker Publishing, New York), 2002.
2. Israel, B. and **Kenney, S.C.** Infectious Mononucleosis. In: *Netter's Internal Medicine*, Edited by M. Runge and M.A. Greganti (Icon Learning Systems, Teterboro, New Jersey), 2003.
3. Israel, B. and **Kenney, S.C.** EBV lytic Infection. In: *Epstein-Barr Virus*, Edited by Erle S. Robertson, Caister Academic Press, 2005.
4. **Kenney, S.C. Reactivation and lytic replication in EBV.** In: Arvin A, Campadelli-Fiume G, Mocarski E, Moore PS, Roizman B, Whitley R, Yamanishi K, editors. *Human Herpesviruses: Biology, Therapy, and Immunoprophylaxis*. Cambridge: Cambridge University Press, 2007, Chapter 25
5. Swaminathan, S and **Kenney, S.** Lytic Epstein-Barr virus infection. *DNA Tumor Viruses*, Damania, B. and Pipas, eds., Springer Science, 2009.
6. **Kenney, S.**, and Fingerroth, J. The molecular basis of lytic induction therapy in relation to gammaherpesvirus (KSHV, EBV)-associated, AIDS-related tumors. *Molecular Basis for Therapy of AIDS-Defining Cancers*, Ed. By Dirk Dittmer and Susan Krown, Springer, 2009.

Invited Research Presentation (last 5 years only):

University of San Antonio, Texas, Cancer Center, April 2009

Grand Rounds, UWCC, October 2010

Grand Rounds, UW Human Biology Department, October 2010

NIH AIDS Malignancy Consortium, October 2010

Northwestern Medical School, November 2010

Johns Hopkins Cancer Center, May 2011

Ohio State University Cancer Center, May 2012

University of Utah Cancer Center March 2013

Invited Landes-Merrimon Lecturer, University of North Carolina School of Medicine Student Research Day, January 2013

Invited Plenary Speaker, ASCI/AAP meeting, Chicago, April 2013

Invited Plenary Speaker, International Herpesvirus meeting, July 2013

Invited Visiting Professor, Harvard Virology graduate program, November 2013

International EBV meeting (featured speaker) July 2014

Invited Plenary speaker, NIH Norman Salzman Symposium, November 2014

Invited Plenary speaker, CROI meeting, February 2015

Clinical Activities

Infectious Diseases Consult Service Attending (1 to 2 months per year)

Service Activities

1. Member of the Editorial Board, Journal of Virology
2. Former permanent member of NIH Study section, and frequent member of Special emphasis NIH Study Sections
3. Member of multiple PhD thesis committees
4. Former member of U.W. Medical School Promotion committee
5. Member of CTSA “K” award committee
6. Member of U.W. Medical School Award Committee
7. Co-leader of UWCC Virology Program