Curriculum Vitae

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Education: B.A. Biology (1976) *summa cum laude*
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Massachusetts General Hospital

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National Institute of Allergy and Infectious Diseases
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1992-95 Associate Member, Molecular Biology Program, Sloan-Kettering Institute, and
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1995- Member, Molecular Biology Program, Sloan-Kettering Institute, and
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Certification: American Board of Internal Medicine (1986)

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NIH MERIT Award (2007)
American Cancer Society Research Professor (2005 -)
American Society for Virology, Wolfgang Joklik Lectureship (2004)
Burroughs Wellcome Fund Award - New Initiatives in Malaria Research (2001-03)
Simon H. Rifkind Chair (1999 -)
American Cancer Society Faculty Research Award (1994-99)
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American Cancer Society Junior Faculty Research Award (1989-92)
Alpha Omega Alpha (1982)
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Editorial: Associate Editor, *Virology* (1993 - 2013)
Editorial Board, *Journal of Virology* (1996 - 2007)
Editorial Board, *Journal of Biological Chemistry* (2000-05)
Editorial Board, *Nucleic Acids Research* (2001-03)

Other Service: Organizer, 2006 FASEB Summer Research Conference on "Poxviruses"
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Member, National Science Foundation MCB review panel (1993-1999)
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Publications:

1. Shuman, S., and Hurwitz, J. (1979) 5' Hydroxyl polyribonucleotide kinase from HeLa cell nuclei. J. Biol. Chem. 254, 10396-10404.
2. Spencer, E., Shuman, S., and Hurwitz, J. (1980) Purification and properties of vaccinia virus DNA-dependent RNA polymerase. J. Biol. Chem. 255, 5388-5395.
3. Shuman, S., Spencer, E., Furneaux, H., and Hurwitz, J. (1980) The role of ATP in *in vitro* vaccinia virus RNA synthesis: effects of AMP-PNP and ATPγS. J. Biol. Chem. 255, 5396-5403.
4. Shuman, S., Surks, M., Furneaux, H., and Hurwitz, J. (1980) Purification and characterization of a GTP-pyrophosphate exchange activity from vaccinia virions: association of the GTP-pyrophosphate exchange activity with vaccinia mRNA guanylyltransferase•RNA (guanine-7-) methyltransferase complex (capping enzyme). J. Biol. Chem. 255, 11588-11598.
5. Shuman, S., and Hurwitz, J. (1981) Mechanism of mRNA capping by vaccinia virus guanylyltransferase: characterization of an enzyme-guanylate intermediate. Proc. Natl. Acad. Sci. USA 78, 187-191. PMCID: PMC319016
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7. Shuman, S. (1982) RNA capping by HeLa cell RNA guanylyltransferase: characterization of a covalent protein-guanylate intermediate. J. Biol. Chem. 257, 7237-7245.
8. Shuman, S., Broyles, S., and Moss, B. (1987) Purification and characterization of a transcription termination factor from vaccinia virions. J. Biol. Chem. 262, 12372-12380.
9. Shuman, S., and Moss, B. (1987) Identification of a vaccinia virus gene encoding a type I DNA topoisomerase. Proc. Natl. Acad. Sci. USA. 84, 7478-7482. PMCID: PMC299319
10. Shuman, S., and Moss, B. (1988) Factor-dependent transcription termination by vaccinia RNA polymerase: evidence for a cis-acting termination signal in nascent RNA. J. Biol. Chem. 263, 6220-6225.
11. Shuman, S., and Moss, B. (1988) Vaccinia virus poly(A) polymerase: specificity for nucleotides and nucleotide analogs. J. Biol. Chem. 263, 8405-8412.
12. Broyles, S., Yuen, L., Shuman, S., and Moss, B. (1988) Purification of a factor required for transcription of vaccinia virus early genes. J. Biol. Chem. 263, 10754-10760.
13. Shuman, S., Golder, M., and Moss, B. (1988) Characterization of vaccinia virus DNA topoisomerase I expressed in *Escherichia coli*. J. Biol. Chem. 263, 16401-16407.
14. Shuman, S., Golder, M., and Moss, B. (1989) Insertional mutagenesis of the vaccinia virus gene encoding a type I DNA topoisomerase: evidence that the gene is essential for virus growth. Virology 170, 302-306.

15. Niles, E.G., Lee-Chen, G., Shuman, S., Moss, B., and Broyles, S. (1989) Vaccinia virus gene D12L encodes the small subunit of the viral mRNA capping enzyme. Virology 172, 513-522.

16. Shuman, S., and Moss, B. (1989) Bromouridine triphosphate inhibits transcription termination and mRNA release by vaccinia virions. J. Biol. Chem. 264, 21356-21360.

17. Shuman, S. (1989) Vaccinia DNA topoisomerase I promotes illegitimate recombination in *Escherichia coli*. Proc. Natl. Acad. Sci. USA 86, 3489-3493. PMCID: PMC287163

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22. Shuman, S. (1990) Catalytic activity of vaccinia mRNA capping enzyme subunits coexpressed in *Escherichia coli*. J. Biol. Chem. 265, 11960-11966.

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