

CURRICULUM VITAE

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DEMOGRAPHIC INFORMATION

Current Appointments:

W. Richard Green Professor of Ophthalmology
The Johns Hopkins University School of Medicine
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Education and Training:

1978	B.S.	Yale College, New Haven, CT	Biology
1983	M.A.	Stanford University, Stanford, CA	Latin American Studies
1983	M.D.	Stanford University, Stanford, CA	Medicine
1983-1984	Intern	Pacific Medical Center, San Francisco, CA	Medicine
1984-1987	Resident	Wilmer Eye Institute, Johns Hopkins Hospital	Ophthalmology
1991	M.P.H.	Johns Hopkins School of Hygiene and Public Health	Public Health

Professional Experience:

1976-1978	Field Assistant	Division of Ornithology, Department of Biology, Yale University, Yale Peabody Museum of Natural History, New Haven, Connecticut
1978-1983	Technician	Stanford Eye Bank, Division of Ophthalmology, Department of Surgery, Stanford University Medical Center, Stanford, California
1984-1985	Assistant Resident	Department of Ophthalmology, Wilmer Eye Institute, The Johns Hopkins University School of Medicine, Baltimore, Maryland
1985-1987	Resident	Department of Ophthalmology, Wilmer Eye Institute, The Johns Hopkins University School of Medicine, Baltimore, Maryland
1987-1990	Instructor	Department of Ophthalmology, Wilmer Eye Institute, The Johns Hopkins University School of Medicine, Baltimore, Maryland
1991-1997	Assistant Professor	Department of Ophthalmology, Wilmer Eye Institute, The Johns Hopkins University School of Medicine, Baltimore, Maryland Department of Molecular Microbiology and Immunology (joint), The Johns Hopkins School of Hygiene and Public Health, Baltimore, Maryland
1993-1997	Assistant Professor	Department of International Health (joint), Center for Human Nutrition, The Johns Hopkins School of Hygiene and Public Health, Baltimore, Maryland
1997-2006	Associate Professor	Department of Ophthalmology, Wilmer Eye Institute, The Johns Hopkins University School of Medicine, Baltimore, Maryland Department of Molecular Microbiology and Immunology (joint), The Johns Hopkins School of Hygiene and Public Health, Baltimore, Maryland Department of International Health (joint), Center for Human Nutrition, The Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland
2006-present	Professor	Department of Ophthalmology, Wilmer Eye Institute, The Johns Hopkins University School of Medicine, Baltimore, Maryland Department of Molecular Microbiology and Immunology (joint), Department of International Health (joint), Center for Human Nutrition, The Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland

RESEARCH ACTIVITIES

Peer-reviewed original research articles

1. **Semba RD**, Day SH, Spencer WH. Conjunctival nodules associated with onchocerciasis. *Archives of Ophthalmology* 1985; 103: 823-824.
2. **Semba RD**, Donnelly JJ, Rockey JH, Lok JB, Sakla AA, Taylor HR. Experimental ocular onchocerciasis in cynomolgus monkeys. II. Chorioretinitis elicited by intravitreal *Onchocerca lienalis* microfilariae. *Investigative Ophthalmology and Visual Science* 1988; 29: 1642-1655.
3. Donnelly JJ, **Semba RD**, Xi MS, Young E, Taylor HR, Rockey JH. Experimental ocular onchocerciasis in cynomolgus monkeys. III. Roles of IgG and IgE antibody and autoantibody and cell-mediated immunity in the chorioretinitis elicited by intravitreal *Onchocerca lienalis* microfilariae. *Tropical Medicine and Parasitology* 1988; 39: 111-116.
4. Taylor HR, **Semba RD**, Newland HS, Keyvan-Larijani E, White A, Dukuly Z, Greene BM. Ivermectin treatment of patients with severe ocular onchocerciasis. *American Journal of Tropical Medicine and Hygiene* 1989; 40: 494-500.
5. **Semba RD**, Murphy RP, Newland HS, White A, Awadzi K, Greene BM, Taylor HR. Longitudinal study of the posterior segment lesion of onchocerciasis. *Ophthalmology* 1990; 97: 1334-1341.
6. Keenum DG, **Semba RD**, Wirasasmita S, Natadisastra G, Muhilal, West KP Jr, Sommer A. Assessment of vitamin A status by a disk applicator for conjunctival impression cytology. *Archives of Ophthalmology* 1990; 108: 1436-1441.
7. **Semba RD**, Wirasasmita S, Natadisastra G, Muhilal, Sommer A. Response of Bitot's spots in preschool children to vitamin A treatment. *American Journal of Ophthalmology* 1990; 110: 416-420.
8. **Semba RD**, Donnelly JJ, Young E, Green WR, Scott A, Taylor HR. Experimental ocular onchocerciasis in cynomolgus monkeys. IV. Chorioretinitis elicited by *Onchocerca volvulus* microfilariae. *Investigative Ophthalmology and Visual Science* 1991; 32: 1499-1507.
9. **Semba RD**, Muhilal, Scott AL, Natadisastra G, Wirasasmita S, Mele L, West KP Jr, Sommer A. Depressed immune response to tetanus in children with vitamin A deficiency. *Journal of Nutrition* 1992; 122: 101-107.
10. **Semba RD**, Muhilal, West KP Jr, Winget M, Natadisastra G, Scott AL, Sommer A. Effect of vitamin A supplementation on hematological indicators of iron metabolism and nutritional status in children. *Nutrition Research* 1992; 12: 469-478.
11. **Semba RD**, Muhilal, Ward BJ, Griffin DE, Scott AL, Natadisastra G, West KP Jr, Sommer A. Abnormal T-cell subset proportions in vitamin A-deficient children. *Lancet* 1993; 341: 5-8.
12. **Semba RD**, Graham NMH, Caiaffa WT, Clement L, Vlahov D. Increased mortality associated with vitamin A deficiency during HIV-1 infection. *Archives of Internal Medicine* 1993; 153: 2149-2154.

13. **Semba RD**, Muhilal, Scott AL, Natadisastra G, West KP Jr, Sommer A. Effect of vitamin A supplementation on IgG subclass responses to tetanus toxoid in children. *Clinical and Diagnostic Laboratory Immunology* 1994; 1: 172-175.
14. **Semba RD**, Miotti P, Chipangwi J, Saah A, Canner J, Dallabetta G, Hoover DR. Maternal vitamin A deficiency and mother-to-child transmission of HIV-1. *Lancet* 1994; 343: 1593-1597.
15. **Semba RD**, Caiaffa WT, Graham NMH, Cohn S, Vlahov D. Vitamin A deficiency and wasting as predictors of mortality in HIV-infected injection drug users. *Journal of Infectious Diseases* 1995; 171: 1196-1202.
16. **Semba RD**, Munasir Z, Beeler J, Akib A, Audet S, Muhilal, Sommer A. Reduced seroconversion to measles in infants given vitamin A with vaccination. *Lancet* 1995; 345: 1330-1332.
17. **Semba RD**, Muhilal, Soesatio B, Natadisastra G. Decline of admissions for xerophthalmia to Cicendo Eye Hospital, Bandung, Indonesia, 1981-1992. *International Ophthalmology* 1995; 19: 39-42.
18. Schaumberg DA, Linehan M, Hawley G, O'Connor J, Dreyfuss M, **Semba RD**. Vitamin A deficiency in the South Pacific. *Public Health* 1995; 109: 311-317.
19. **Semba RD**, Miotti PG, Chipangwi JD, Liomba G, Yang LP, Saah A, Dallabetta G, Hoover DR. Infant mortality and maternal vitamin A deficiency during HIV infection. *Clinical Infectious Diseases* 1995; 21: 966-972.
20. **Semba RD**, Park SW, Royal W, Griffin DE. Vitamin A deficiency and T-cell subpopulations in HIV-infected adults. *Nutrition Research* 1996; 16: 915-923.
21. Hoover DR, Peng Y, Saah A, **Semba RD**, Detels RR, Rinaldo CR, Phair JP. Occurrence of cytomegalovirus retinitis after human immunodeficiency virus immunosuppression. *Archives of Ophthalmology* 1996; 114: 821-827.
22. **Semba RD**, Bulterys M, Munyeshuli V, Gatsinzi T, Saah A, Chao A, Dushimimana A. Vitamin A deficiency and T-cell subpopulations in children with meningococcal disease. *Journal of Tropical Pediatrics* 1996; 42: 287-290.
23. Schaumberg DA, O'Connor J, **Semba RD**. Risk factors for xerophthalmia in the Republic of Kiribati. *European Journal of Clinical Nutrition* 1996; 50: 761-764.
24. **Studies of Ocular Complications of AIDS Research Group** in Collaboration with the AIDS Clinical Trials Group. Combination foscarnet and ganciclovir therapy vs monotherapy for the treatment of relapsed cytomegalovirus retinitis in patients with AIDS. The cytomegalovirus retreatment trial. *Archives of Ophthalmology* 1996; 114: 23-33.
25. Jabs DA, Dunn JP, Enger C, Forman M, Bressler N, Charache P, and the Cytomegalovirus Retinitis and Viral Resistance Study Group. Cytomegalovirus retinitis and viral resistance. *Archives of Ophthalmology* 1996; 114: 809-814.

26. Wu AW, Coleson LC, Holbrook JT, Jabs DA, **Studies of Ocular Complications of AIDS Research Group**. Measuring visual function and quality of life in patients with cytomegalovirus retinitis: development of a questionnaire. *Archives of Ophthalmology* 1996; 114: 841-847.
27. **Studies of Ocular Complications of AIDS Research Group** in collaboration with the AIDS Clinical Trials Group. Clinical vs photographic assessment of treatment of cytomegalovirus retinitis. Foscarnet-Ganciclovir Cytomegalovirus Retinitis Trial Report 8. *Archives of Ophthalmology* 1996; 114: 848-855.
28. **Studies of Ocular Complications of AIDS Research Group** in collaboration with the AIDS Clinical Trials Group. Assessment of cytomegalovirus retinitis: clinical evaluation vs centralized grading of fundus photographs. *Archives of Ophthalmology* 1996; 114: 791-805.
29. **Semba RD**, Farzadegan H, Vlahov D. Vitamin A levels and human immunodeficiency virus load in injection drug users. *Clinical and Diagnostic Laboratory Immunology* 1997; 4: 93-95.
30. Greenberg BL, **Semba RD**, Vink PE, Farley JJ, Sivapalasingam M, Steketee RW, Thea DM, Schoenbaum EE. Vitamin A deficiency and maternal-infant transmission of human immunodeficiency virus in two metropolitan areas in the United States. *AIDS* 1997; 11: 325-332.
31. **Semba RD**, Miotti PG, Chipangwi JD, Liomba G, Yang LP, Wu CO, Hoover DR. Maternal vitamin A deficiency and child growth failure during human immunodeficiency virus infection. *Journal of Acquired Immune Deficiency Syndromes and Human Retrovirology* 1997; 14: 219-222.
32. Tang AM, Graham NMH, **Semba RD**, Saah AJ. Association between serum vitamin A and E levels and HIV-1 disease progression. *AIDS* 1997; 11: 613-620.
33. **Study of Ocular Complications of AIDS Research Group** in Collaboration with the AIDS

- Clinical Trials Group. MSL-109 adjuvant therapy for cytomegalovirus retinitis in patients with acquired immunodeficiency syndrome. *Archives of Ophthalmology* 1997; 115: 1528-1536.
34. Cobra C, Muhilal, Kusnandi, Rustama D, Djatnika, Suwardi SS, Permaesih D, Muherdiyantiningsih, Martuti S, **Semba RD**. Infant survival is improved by oral iodine supplementation. *Journal of Nutrition* 1997; 127: 574-578.
35. **Studies of Ocular Complications of AIDS Research Group** in collaboration with the AIDS Clinical Trials Group. Parenteral cidofovir for cytomegalovirus retinitis in patients with AIDS: the HPMPIC peripheral cytomegalovirus retinitis trial. A randomized, controlled trial. *Annals of Internal Medicine* 1997; 126: 264-274.
36. **Studies of Ocular Complications of AIDS Research Group** in collaboration with the AIDS Clinical Trials Group. Rhegmatogenous retinal detachment in patients with cytomegalovirus retinitis: the foscarnet-ganciclovir cytomegalovirus retinitis trial. *American Journal of Ophthalmology* 1997; 124: 61-70.
37. **Semba RD**, Akib A, Beeler J, Munasir Z, Permaesih D, Muherdiyantiningsih, Komala, Martuti S, Muhilal. Effect of vitamin A supplementation on measles vaccination in nine-month-old infants. *Public Health* 1997; 111: 245-247.
38. Shalaby IA, Dunn JP, **Semba RD**, Jabs DA. Syphilitic uveitis in HIV-infected patients. *Archives of Ophthalmology* 1997; 115: 469-473.
39. Greenberg BL, **Semba RD**, Schoenbaum E, Klein RS. Vitamin A deficiency among former and current injecting drug users in Bronx, New York. *Nutrition Research* 1997; 17: 785-796.
40. Tay-Kearney ML, Enger C, **Semba RD**, Royal W, Dunn JP, Jabs DA. T-cell subsets and CMV retinitis in HIV-infected patients. *Journal of Infectious Diseases* 1997; 176: 790-794.

41. Enger C, Jabs DA, Dunn JP, Forman MS, Bressler NM, Margolick JB, Charache P, and the **Cytomegalovirus Retinitis and Viral Resistance Study Group**. Viral resistance and CMV retinitis: design and methods of a prospective study. *Ophthalmic Epidemiology* 1997; 4: 41-48.
42. **Studies of Ocular Complications of AIDS Research Group** in collaboration with the AIDS Clinical Trials Group. MSL-109 adjuvant therapy for cytomegalovirus retinitis in patients with acquired immunodeficiency syndrome: the Monoclonal Antibody Cytomegalovirus Retinitis Trial. *Archives of Ophthalmology* 1997; 115: 1528-1536.
43. **Studies of Ocular Complications of AIDS Research Group** in collaboration with the AIDS Clinical Trials Group. Cytomegalovirus (CMV) culture results, drug resistance, and clinical outcome in patients with AIDS and CMV retinitis treated with foscarnet or ganciclovir. *Journal of Infectious Diseases* 1997; 176: 50-58.
44. **Studies of Ocular Complications of AIDS Research Group** in collaboration with the AIDS Clinical Trials Group. Foscarnet-Ganciclovir Cytomegalovirus Retinitis Trial. 5. Clinical features of cytomegalovirus retinitis at diagnosis. *American Journal of Ophthalmology* 1997; 124: 141-157.
45. **Semba RD**, Lyles CM, Margolick J, Caiaffa WT, Farzadegan H, Cohn S, Vlahov D. Vitamin A supplementation and human immunodeficiency virus load in injection drug users. *Journal of Infectious Diseases* 1998; 177: 611-616.
46. **Semba RD**, Miotti PG, Lan Y, Chipangwi JD, Hoover DR, Dallabetta GA, Yang LP, Saah AJ. Maternal serum lactoferrin and vertical transmission of HIV. *AIDS* 1998; 12: 331-332.
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48. Lewallen S, Taylor TE, Molyneux ME, **Semba RD**, Wills BA, Courtright P. Association between measures of vitamin A and the ocular fundus findings in cerebral malaria. *Archives of Ophthalmology* 1998; 116: 293-296.
49. **Semba RD**, Miotti PG, Chipangwi JD, Yang LP, Saah A, Hoover DR. Maternal vitamin A deficiency and infant mortality in Malawi. *Journal of Tropical Pediatrics* 1998; 44: 232-234.
50. Park SW, Royal W, **Semba RD**, Wiegand G, Griffin DE. Expression of adhesion molecules and CD28 on T lymphocytes during human immunodeficiency virus infection. *Clinical and Diagnostic Laboratory Immunology* 1998; 5: 583-587.
51. Jabs DA, Enger C, Forman M, Dunn JP, for **the Cytomegalovirus Retinitis and Viral Resistance Study Group**. Incidence of foscarnet resistance and cidofovir resistance in patients treated for cytomegalovirus retinitis. *Antimicrobial Agents & Chemotherapy* 1998; 42: 2240-2244.
52. Rwangabwoba JM, Fischman H, **Semba RD**. Serum vitamin A levels during tuberculosis and human immunodeficiency virus infection. *International Journal of Tuberculosis and Lung Disease* 1998; 2: 771-773.
53. Thorne JE, Jabs DA, Vitale S, Miller T, Dunn JP, **Semba RD**. Catheter complications in AIDS patients treated for cytomegalovirus retinitis. *AIDS* 1998; 12: 2321-2327.
54. Jabs DA, Enger C, Dunn JP, Forman M, Hubbard L, for **the Cytomegalovirus Retinitis and Viral Resistance Study Group**. Cytomegalovirus retinitis and viral resistance: 3. Culture results. *American Journal of Ophthalmology* 1998; 126: 543-549.
55. **Semba RD**. Vitamin A as "anti-infective" therapy, 1920-1940. *Journal of Nutrition* 1999; 129: 783-791.
56. Taffs RE, Enterline JC, Rusmil K, Muhilal, Suwardi SS, Rustama D, Djatnika, Cobra C, **Semba RD**, Cohen N, Asher DM. Oral iodine supplementation does not reduce

neutralizing-antibody

responses to oral poliovirus vaccine. *Bulletin of the World Health Organization* 1999; 77: 484-491.

57. Lan Y, Kumwenda N, Taha TF, Chipangwi JD, Miotti PG, Mtimavalye L, Broadhead R, van der Hoeven L, Hoover DR, **Semba RD**. Carotenoid status of pregnant women with and without HIV

infection in Malawi. *East African Medical Journal* 1999; 76: 133-137.

58. Shankar AH, Genton B, **Semba RD**, Wu L, Baisor M, Paino J, Tamja S, Wabanange W, Tielsch

J, Alpers M, West KP Jr. Effect of vitamin A supplementation on morbidity due to *Plasmodium*

falciparum in young children in Papua New Guinea: A randomized trial. *Lancet* 1999; 354: 203-209.

59. **Semba RD**, Kumwenda N, Hoover DR, Taha TE, Quinn TC, Mtimavalye L, Biggar R, Broadhead R, Miotti PG, Sokoll L, van der Hoeven L, Chipangwi JD. Human immunodeficiency virus load in breast milk, mastitis, and mother-to-child transmission of human

immunodeficiency virus type 1. *Journal of Infectious Diseases* 1999; 180: 93-98.

60. **Semba RD**, Kumwenda N, Taha TE, Hoover DR, Lan Y, Eisinger W, Mtimavalye L, Broadhead

R, Miotti PG, van der Hoeven L, Chipangwi JD. Mastitis and immunological factors in breast

milk of lactating women in Malawi. *Clinical and Diagnostic Laboratory Immunology* 1999; 6: 671-674.

61. Burns DN, FitzGerald G, **Semba RD**, Hershow R, Zorilla C, Pitt J, Hammill H, Cooper ER,

Fowler MG, Landesman S. Vitamin A deficiency and other nutritional indices during pregnancy

in human immunodeficiency virus (HIV-1) infection: prevalence, clinical correlations, and

outcome. *Clinical Infectious Diseases* 1999; 29: 328-334.

62. **Semba RD**, Muhilal, Mohgaddam NEG, Munasir Z, Akib A, Permaesih D, Muherdiyantiningsih,

Osterhaus A. Integration of vitamin A supplementation with the Expanded Program on

- Immunization does not affect seroconversion to oral poliovirus vaccine in infants. *Journal of Nutrition* 1999; 129: 2203-2205.
63. **Semba RD**, Kumwenda N, Taha TE, Hoover DR, Quinn TC, Lan Y, Mtimavalye L, Broadhead R, Miotti PG, van der Hoeven L, Chipangwi JD. Mastitis and immunological factors in breast milk of human immunodeficiency virus-infected women. *Journal of Human Lactation* 1999; 15: 301-306.
64. **Semba RD**. Théophile Roussel and the elimination of pellagra from 19th century France. *Nutrition* 2000; 16: 231-233.
65. Tang AM, Smit E, **Semba RD**, Lyles CM, Shah N, Li D, Vlahov D. Improved antioxidant status among HIV-infected injection drug users on potent antiretroviral therapy. *Journal of Acquired Immunodeficiency Syndromes* 2000; 23: 321-326.
66. **Studies of the Ocular Complications of AIDS Research Group** in Collaboration with the AIDS Clinical Trials Group. Long-term follow-up of patients with AIDS treated with parenteral zidovudine for cytomegalovirus retinitis: the HPMPV Peripheral Cytomegalovirus Retinitis Trial. *AIDS* 2000; 14: 1571-1581.
67. Almekinder J, Manda W, Soko D, Lan Y, Hoover DR, **Semba RD**. Evaluation of plasma retinol-binding protein as a surrogate measure for plasma retinol levels. *Scandinavian Journal of Clinical & Laboratory Investigation* 2000; 60: 199-204.
68. Holbrook JT, Davis MD, Hubbard LD, Martin BK, Holland GN, Jabs DA, Gilpin AK, Meinert CL, Reshef DS, for the **Studies of the Ocular Complications of AIDS Research Group**. Risk factors for advancement of cytomegalovirus retinitis in patients with acquired immunodeficiency syndrome. *Archives of Ophthalmology* 2000; 118: 1196-1204.
69. **Semba RD**, Muhilal, West Jr. KP, Natadisastra G, Eisinger W, Lan Y, Sommer A. Hyporetinolemia and acute phase proteins in children with and without

xerophthalmia. *American*

Journal of Clinical Nutrition 2000; 72: 146-153.

70. **Semba RD**, Garrett E, Johnson B, Guralnik JM, Fried LP. Vitamin D deficiency among older women with and without disability. *American Journal of Clinical Nutrition* 2000; 72: 1529-1534.
71. French AL, Kirstein LM, Massad LS, **Semba RD**, Minkoff H, Landesman S, Palefsky J, Young M, Anastos K, Cohen MH. The association of vitamin A deficiency with cervical squamous intraepithelial lesions in HIV-infected women. *Journal of Infectious Diseases* 2000; 182: 1084-1089.
72. **Semba RD**, Kumwenda N, Hoover DR, Taha ET, Mtimavalye L, Lema V, Broadhead R, Eisinger W, Miotti PG, Chipangwi JD. Assessment of iron status using transferrin receptor in pregnant women with and without human immunodeficiency virus infection in Malawi. *European Journal of Clinical Nutrition* 2000; 54: 872-877.
73. **Semba RD**, Kumwenda N, Taha TE, Mtimavalye L, Broadhead R, Miotti PG, Eisinger W, Hoover D, Chipangwi JD. Plasma and breast milk vitamin A as indicators of vitamin A status in pregnant women. *International Journal for Vitamin and Nutrition Research* 2000; 70: 271-277.
74. **Semba RD**, Taha TE, Kumwenda N, Mtimavalye L, Broadhead R, Miotti PG, Chipangwi JD. Iron status and indicators of HIV disease severity among pregnant women in Malawi. *Clinical Infectious Diseases* 2001; 32: 1496-1499.
75. **Semba RD**, Shah N, Vlahov D. Improvement of anemia among HIV-infected injection drug users on highly active antiretroviral therapy. *Journal of Acquired Immune Deficiency Syndromes* 2001; 26: 315-319.
76. Metzger AM, Mukasa G, Shankar AH, Ndeezi G, Melikian G, **Semba RD**. Antioxidant micronutrients and acute malaria in children in Kampala, Uganda. *American*

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Tropical Medicine and Hygiene 2001; 65: 115-119.

77. Holbrook JT, Meinert CL, Jabs DA for the **Studies of the Ocular Complications of AIDS Research Group**. Patient notification and follow-up after suspension of treatment protocols: experience from four clinical trials of treatments for AIDS-related CMV retinitis. *Controlled Clinical Trials* 2001; 22: 62-68.
78. Mehendale SM, Shepherd ME, Brookmeyer RS, **Semba RD**, Divekar AD, Gangakhedkar RR, Joshi S, Paranjape RS, Risbud AR, Gadkari DA, Bollinger RC. Low carotenoid concentrations and risk of HIV seroconversion in Pune, India. *Journal of Acquired Immune Deficiency Syndromes* 2001; 26: 352-359.
79. **Studies of the Ocular Complications of AIDS Research Group** in collaboration with the AIDS Clinical Trials Group. The ganciclovir implant plus oral ganciclovir versus parenteral cidofovir for the treatment of cytomegalovirus retinitis in patients with acquired immunodeficiency syndrome: the Ganciclovir Cidofovir Cytomegalovirus Retinitis Trial. *American Journal of Ophthalmology* 2001; 131: 457-467.
80. **Semba RD**, Kumwenda N, Taha TE, Mtimavalye L, Broadhead R, Garrett E, Miotti PG, Chipangwi J. Impact of vitamin A supplementation on anemia and plasma erythropoietin concentrations in pregnant women: a controlled clinical trial. *European Journal of Haematology* 2001; 66: 389-395.
81. Jabs DA, Martin BK, Forman MS, Dunn JP, Davis JL, Weinberg DV, Biron KK, and Baldanti F, for the **Cytomegalovirus Retinitis and Viral Resistance Study Group**. Mutations conferring ganciclovir resistance in a cohort of patients with acquired immunodeficiency syndrome and cytomegalovirus retinitis. *Journal of Infectious Diseases* 2001; 183: 333-337.
82. Melikian G, Mmiro F, Ndugwa C, Perry R, Jackson JB, Garrett E, Tielsch J,

Semba RD.

Relationship of vitamin A and carotenoid status to growth failure and mortality among human immunodeficiency virus-infected infants in Uganda. *Nutrition* 2001; 17: 567-572.

83. **Semba RD**, Munasir Z, Akib A, Melikian G, Permaesih D, Muherdiyantiningsih, Martuti S, Muhilal. Integration of vitamin A supplementation with the Expanded Programme on Immunization: lack of impact on morbidity or infant growth. *Acta Paediatrica* 2001; 90: 1107-1111.

84. **Semba RD**, Shah N, Klein RS, Mayer KH, Schuman P, Gardner LI, Vlahov D, HER (Human Immunodeficiency Virus Epidemiology Research) Study Group. Highly active antiretroviral therapy associated with improved anemia among HIV-infected women. *AIDS Patient Care STDS* 2001; 15: 473-480.

85. Holbrook JT, Meinert CL, Van Natta ML, Davis M, Hubbard L, Jabs DA for the **Studies of the Ocular Complications of AIDS**. Photographic measures of cytomegalovirus retinitis as surrogates of visual outcomes in treated patients. *Archives of Ophthalmology* 2001; 119: 554-563.

86. Shah S, Whalen C, Kotler DP, Melikian G, Mugerwa R, **Semba RD**. Severity of human immunodeficiency virus infection is associated with decreased phase angle, fat mass and body cell mass in adults with pulmonary tuberculosis infection in Uganda. *Journal of Nutrition* 2001; 131: 2843-2847.

87. Nussenblatt V, Mukasa G, Metzger A, Ndeezi G, Garrett E, **Semba RD**. Anemia and interleukin-10, tumor necrosis factor alpha, and erythropoietin levels among children with acute uncomplicated *Plasmodium falciparum* malaria. *Clinical and Diagnostic Laboratory Immunology* 2001; 8: 1164-1170.

88. Martin BK, Kaplin Gilpin AM, Jabs DA, Wu AW, for the **Studies of the Ocular Complications of AIDS Research Group**. Reliability, validity, and responsiveness of general and disease specific quality of life measures in a clinical trial for cytomegalovirus retinitis. *Journal of Clinical Epidemiology* 2001; 54: 376-386.
89. Verreault R, **Semba RD**, Volpato S, Ferrucci L, Fried LP, Guralnik JM. Low serum vitamin D does not predict new disability and loss in muscle strength in older women. *Journal of the American Geriatrics Society* 2002; 50: 912-917.
90. **Semba RD**, Broadhead R, Taha TE, Totin D, Ricks MO, Kumwenda N. Erythropoietin response to anemia among human immunodeficiency virus-infected infants in Malawi. *Haematologica* 2001; 86: 1221-1222.
91. Totin D, Ndugwa C, Mmiro F, Perry R, Jackson JB, **Semba RD**. Iron deficiency anemia is highly prevalent among human immunodeficiency virus-infected and uninfected infants in Uganda. *Journal of Nutrition* 2002; 132: 423-429.
92. Davidson M, Min YI, Holbrook JT, Van Natta ML, Murphy R, Jabs DA, Welch W, Meinert CL for the **Studies of the Ocular Complications of AIDS Research Group**. Use of filgrastim as adjuvant therapy in patients with AIDS-related cytomegalovirus retinitis. *AIDS* 2002; 16: 757-765.
93. **Semba RD**, Yuniar Y, Gamble MV, Natadisastra G, Muhilal. Assessment of vitamin A status of preschool children in Indonesia using plasma retinol-binding protein. *Journal of Tropical Pediatrics* 2002; 48: 84-87.
94. Davidson M, Min YI, Holbrook JT, Van Natta M, Quinn TC, Murphy RL, Welch W, Jabs DA, Meinert CL for the **Studies of the Ocular Complications of AIDS Research Group**. Influence of filgrastim (granulocyte colony-stimulating factor) on human immunodeficiency virus type 1 RNA in patients with cytomegalovirus retinitis. *Journal of Infectious Diseases* 2002; 186: 1013-1018.

95. Jabs DA, Kaplan Gilpin AM, Min YI, Erice A, Kempen JH, Quinn TC, for the **Studies of the Ocular Complications of AIDS Research Group**. HIV and cytomegalovirus viral load and clinical outcomes in AIDS and cytomegalovirus retinitis patients: Monoclonal Antibody Cytomegalovirus Retinitis Trial. *AIDS* 2002; 16: 877-887.
96. **Semba RD**, Shah N, Vlahov D. Risk factors and cumulative incidence of anaemia among HIV-infected injection drug users. *International Journal of AIDS & STDS* 2002; 13: 119-123.
97. **Semba RD**, Shah N, Klein RS, Mayer KH, Schuman P, Vlahov D, Human Immunodeficiency Virus Epidemiology Research Study Group. Prevalence and cumulative incidence of and risk factors for anemia in a multicenter cohort study of human immunodeficiency virus-infected and -uninfected women. *Clinical Infectious Diseases* 2002; 34: 260-266.
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99. French AL, Cohen MH, Gange SJ, Burger H, Gao W, **Semba RD**, Meyer III WA, Robison E, Anastos K. Vitamin A deficiency and genital viral burden in women infected with HIV-1. *Lancet* 2002; 359: 1210-1212.
100. Clark TD, Mmiro F, Ndugwa C, Perry RT, Jackson JB, Melikian G, **Semba RD**. Risk factors and cumulative incidence of anemia among human immunodeficiency virus-infected children in Uganda. *Annals of Tropical Paediatrics* 2002; 22: 11-17.
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Book Chapters and Monographs

1. **Semba RD**. Medical care and the survival of the Venezuelan Yanomami. IN: Colchester M (ed.) *The Health and Survival of the Venezuelan Yanoama*. International Work

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Indigenous Affairs 53, Copenhagen, pp. 31-43, 1985.
2. Colchester M, **Semba RD**. The health and survival of the Yanoama Indians. IN: Colchester M (ed.) *The Health and Survival of the Venezuelan Yanoama*. International Work Group for Indigenous Affairs 53, Copenhagen, pp. 13-30, 1985.
 3. Taylor HR, **Semba RD**. Eye manifestations. IN: Warren KS, Mahmoud AAF. (eds.) *Tropical and Geographical Medicine*, New York, McGraw-Hill, 1990, pp. 37-47.
 4. Beltran F, Silva JC, **Semba RD**. *Manual de Evaluacion Oftalmologica en la Oncocercoses*, Pan American Health Organization, Washington, D.C., 1993.
 5. Ward BJ, **Semba RD**. Vitamin A and HIV Infection. IN: Watson RR (ed.) *Nutrition and AIDS*, CRC Press, 1994.
 6. **Semba RD**. Micronutrients and the pathogenesis of HIV/AIDS. IN: Fitzpatrick DW, Anderson JE, L' Abbe ML (eds.). *Proceedings of the 16th International Congress of Nutrition*. July 27- August 1, 1997, Montreal, Canadian Federation of Biological Sciences. Ottawa, Canada, 1998, pp. 349-351.
 7. **Semba RD**. Impact of vitamin A on immunity and infection in developing countries. IN: Deckelbaum R, Bendich A (eds.). *Preventive Nutrition*, Humana Press, Totowa, New Jersey, 1997.
 8. **Semba RD**, Smith JC. Vitamin A and the immune system. IN: Delves PJ (ed.). *Encyclopedia of Immunology*, Second Edition. Academic Press, London, 1998.
 9. **Semba RD**. Vitamin A and immune function. IN: *Military Strategies for Sustainment of Nutrition and Immune Function in the Field*. Institute of Medicine, Washington, D.C. National Academy Press, 1999, pp. 279-288.

10. **Semba RD.** Nutritional blindness. IN: Albert DM, Jakobiec FA (eds.). *Principles and Practice of Ophthalmology*. Vol. 5, Second Edition, Philadelphia, W.B. Saunders, 2000, pp. 4760-4766.
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12. **Semba RD.** Nutrition and infectious diseases. IN: Nelson K, Graham NMH (eds.). *The Epidemiology of Infectious Diseases*. Aspen Publishers, Gaithersburg, Maryland, 2000.
13. Font RL, Gutierrez Y, **Semba RD**, Marty AM. Ocular onchocerciasis. IN: Meyers WM, Neafie RC, Marty AM, Wear DJ (eds.). *Pathology of Infectious Diseases. Volume 1. Helminthiases*. Armed Forces Institute of Pathology, Washington, D.C., 2000, pp. 307-318.
14. **Semba RD.** Iodine deficiency disorders. IN: **Semba RD**, Bloem NW (eds.). *Nutrition and Health in Developing Countries*. Humana Press, Totowa, New Jersey, 2001, pp. 343-363.
15. Whalen C, **Semba RD.** Tuberculosis. IN: **Semba RD**, Bloem NW (eds.). *Nutrition and Health in Developing Countries*. Humana Press, Totowa, New Jersey, 2001, pp. 209-235.
16. **Semba RD.** Nutrition and development: a historical perspective. IN: **Semba RD**, Bloem MW (eds.). *Nutrition and Health in Developing Countries*. Humana Press, Totowa, New Jersey, 2001, pp. 1-30.
17. **Semba RD**, Gray G. Human immunodeficiency virus infection. IN: **Semba RD**, Bloem MW (eds.). *Nutrition and Health in Developing Countries*. Humana Press, Totowa, New Jersey, 2001, pp. 237-266.
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- Deckelbaum R, Bendich A (eds.). *Preventive Nutrition*, Second Edition, Humana Press, Totowa, New Jersey, 2001, pp. 329-346.
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24. **Semba RD.** Nutrition and infection. IN: Shils M, Shike E, Ross AC, Cabellero B, Cousin R. (eds.). *Modern Nutrition in Health and Disease. Tenth edition*. Baltimore, Williams & Wilkins, 2006, pp 1401-1413.
25. **Semba RD.** The impact of improved nutrition on disease prevention. IN: Ward JW, Warren C (eds.). *Silent Victories: the History and Practice of Public Health in Twentieth-Century America*. New York, Oxford University Press, 2006, pp. 163-192.
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27. Huang HY, Caballero B, Chang S, Alberg AJ, **Semba RD**, Schneyer C, Wilson RF, Cheng TY, Prokopowicz G, Barnes G, Vassy J, Bass EB. *Multivitamin/Mineral Supplements in the Prevention of Chronic Disease*. Evidence Report/Technology Assessment No. 139. AHRQ Publication No. 06-E012. Rockville, MD, Agency for Healthcare Research and Quality, 2006.
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30. **Semba RD**. Nutrition and development: a historical perspective. IN: Semba RD, Bloem MW (eds) *Nutrition and Health in Developing Countries. Second Edition*. Totowa, NJ, Humana Press, 2008.
31. Best C, **Semba RD**. Parental tobacco use and child malnutrition. IN: Semba RD, Bloem MW (eds) *Nutrition and Health in Developing Countries. Second Edition*. Totowa, NJ, Humana Press, 2008.
32. **Semba RD**, Delange F. Iodine deficiency disorders. IN: Semba RD, Bloem MW (eds) *Nutrition and Health in Developing Countries. Second Edition*. Totowa, NJ, Humana Press, 2008.
33. Ramakrishan U, **Semba RD**. Iron deficiency. IN: Semba RD, Bloem MW (eds) *Nutrition and Health in Developing Countries. Second Edition*. Totowa, NJ, Humana Press, 2008.
34. **Semba RD**, Victora C. Neonatal mortality. IN: Semba RD, Bloem MW (eds) *Nutrition and*

Health in Developing Countries. Second Edition. Totowa, NJ, Humana Press, 2008.

Books and Textbooks

1. Semba RD, Bloem MW. (eds.). *Nutrition and Health in Developing Countries.* Humana Press, Totowa, New Jersey, 2001.
2. Semba RD. *Handbook of Nutrition and Ophthalmology.* Humana Press, Totowa, New Jersey, 2007, 496 pp.
3. Semba RD, Bloem MW (eds). *Nutrition and Health in Developing Countries. Second Edition.* Humana Press, Totowa, New Jersey, 2008, 931 pp.
4. Semba RD. *The Vitamin A Story: Lifting the Shadow of Death.* Karger, Basel, Switzerland, 2012, 207 pp.
5. Semba RD, Smets K. *A Perfect Vision: Catalogue of the William Holland Wilmer Rare Book Collection.* Baltimore, Johns Hopkins University, 2013, 604 pp.

Book Reviews

1. Semba RD. Life, liberty, and the pursuit of vitamins. [Review of Apple RD. *Vitamina: Vitamins in American Culture.* Rutgers University Press, New Brunswick, NJ, 1996] *The Lancet* 1997; 349: 658.
2. Semba RD. Lessons in the rice bowl. [Review of Carpenter KJ. *Beriberi, white rice, and vitamin B: a disease, a cause, and a cure.* Berkeley, University of California Press, 2000] *The Lancet* 2000; 356: 172-173.
3. Semba RD. Book Review. [Review of Kraut A. *Goldberger's War: The Life and Work of a Public Health Crusader.* New York, Hill & Wang, 2003] *American Journal of Clinical Nutrition* 2004; 80: 531-532.

Book Exhibits

1. Semba RD. Curator of "A Perfect Vision: The William Holland Wilmer Rare Book

Collection”

at the George Peabody Library, Baltimore, Maryland, April–June 2006. First public exhibit of

rare incunabula and early books on astronomy, optics, medicine, and ophthalmology collected by

Dr. Wilmer and bequeathed to the Wilmer Institute in the 1930s.

EDUCATIONAL ACTIVITIES

Teaching

Course 222.643. History of Nutrition in Public Health. Course prepared and solo-taught by Dr. Semba, offered in the 4th quarter, 1999, 2000, 2001, 2002.

Other regular lectures have been given in:

Course 222.649 International Nutrition,
Course 340.627 Epidemiology of Infectious Diseases

Mentoring

Advisees: Debra Schaumberg, Public Health Ophthalmology program, Johns Hopkins

School of Hygiene and Public Health, research on nutritional blindness in the South Pacific, MPH, 1994. (Peer-reviewed scientific articles #18, 23). Professor, Department of Ophthalmology, University of Utah School of Medicine, Salt Lake City, Utah.

Claudine Cobra, Department of International Health, Johns Hopkins School of Hygiene and Public Health, Ph.D., 1996; research on iodine deficiency disorders in Indonesia for doctoral thesis. (Peer-reviewed scientific articles #34, 56).

Veronique Nussenblatt, Department of Epidemiology, Johns Hopkins School of Hygiene and Public Health, research on malaria for MHS degree, 2001. (Peer-reviewed scientific articles #87, 104, 128, 135, 140, 152, review #20). Fellow, Infectious Disease, Department of Medicine, Johns Hopkins Hospital.

Heidi Schmaltz, M.D., clinical post-doctoral fellow 2002–2004

with Linda P.

Fried; research on chronic cytomegalovirus infection in the Women's Health and

Aging Studies I and II. (Peer-reviewed scientific article #139).

Present position:

Clinical Assistant Professor, Department of Medicine, University of Calgary,
Canada

Monique van Lettow, doctoral candidate, Wageningen Agricultural University,

Division of Human Nutrition and Epidemiology, The Netherlands.

Research on

tuberculosis and nutrition for doctoral degree (Peer-reviewed scientific articles

#118, 137, 138, 147, 187, review #24). Project Director, Dignitas, Malawi.

Emily Joy Nicklett, Ph.D., post-doctoral fellow, Johns Hopkins Bloomberg School of Public Health. Research on nutrition and aging (Peer-reviewed scientific article #261, 284, 288, 297, review #31). Assistant Professor, University of Michigan

Mentored research: Amy Metzger, masters student, Rollins School of Public Health, Emory University, Atlanta, GA; research on malaria for MPH thesis in Uganda, September 1998–February 1999. (Peer-reviewed scientific articles #76, 87, 104). Consultant

Snehal Shah, medical student, SUNY Health Science Center at Brooklyn,

Brooklyn, NY; research on tuberculosis in Uganda, October 1998–July 1999.

(Peer-reviewed scientific paper #86). Pediatrician, Boston, Massachusetts.

Shannen K. Allen, medical student, Johns Hopkins School of Medicine,

Baltimore, MD; research on trachoma, summer 2001. (Peer-reviewed scientific

article #105). Ophthalmologist, The Eye Center, Inc., Rockville, Maryland.

Wilson Kwong, masters student, Stanford University, Stanford, CA; research on

relationship between iron deficiency and lead toxicity, summer

2003. (Invited review article #28). Intern, Internal Medicine, Massachusetts General Hospital, Harvard Medical School.

Leah Kalm, doctoral student, Department of Health Policy and Management, Johns Hopkins Bloomberg School of Public Health; research on human nutritional deprivation studies and establishment of human dietary requirements, 2003-2004. (Peer-reviewed scientific article #148). Principal Policy Analyst, New York State Task Force on Life and the Law

Maria Maqsood, medical student; research on inflammatory factors in children with xerophthalmia, summer 2004. (Peer-reviewed scientific article #141). Medical Doctor, Research Fellow, Doheny Eye Institute, Los Angeles, California.

Barbara (Violet) Dancheck, laboratory technologist; research on nutrition, 2002-2005 (Peer-reviewed scientific articles #135, 140, 146). Ph.D., Brown University, 2010. Fellow, Food for Peace, United States Agency for International Development

Sarah G. Berger, masters student, Department of International Health, Johns Hopkins Bloomberg School of Public Health; research on programmatic coverage of vitamin A programs for child survival in southeast Asia, 2006-2007 (Peer-reviewed scientific articles #170, #186). MBA student, Rotman School of Management, Toronto.

Cora Best, masters student, Department of International Health, Johns Hopkins Bloomberg School of Public Health; research on the impact of parental tobacco use upon malnutrition in poor families in Bangladesh and Indonesia, 2006-2007 (Peer-reviewed scientific articles #187, #198; book chapter #29). Doctoral Student, Cornell University.

Ashley A. Campbell, medical student, Johns Hopkins School of Medicine;

research on relationship of household food expenditures, food prices, and household food insecurity on child malnutrition and mortality at the United Nations World Food Programme in Rome, Italy, 2008 (Peer-reviewed scientific articles #213, 223, 231, 239, 241, 250, 253, 260, 264, 277, 278, 281, 290, 295). Resident in Ophthalmology, Massachusetts Eye and Ear Infirmary, Harvard University; Fellow, Weill Cornell Medical Center.

Medicine; research
Ellie Souganidis, medical student, Johns Hopkins School of
on anemia, summer internship at Micronutrients Unit, World Health Organization, Geneva, Switzerland. (Peer-reviewed scientific articles #285, 294).
Resident in Pediatrics, Children's Hospital of Philadelphia

Thesis Committees: Hamam Hadi, Sc.D., Johns Hopkins School of Hygiene and Public Health,
Department of International Health, 1997. Role: On thesis committee.

Maria Deloria, Ph.D., Johns Hopkins School of Hygiene and Public Health,
Department of Epidemiology, 2000. Role: On thesis committee, co-investigator.

Jane Schmitz, candidate Sc.D., Johns Hopkins Bloomberg School of Public Health, Department of International Health. Role: Alternate on thesis committee (08/05).

Jennifer Thorne, M.D., candidate Ph.D., Johns Hopkins Bloomberg School of Public Health, Department of Epidemiology. Role: Alternate on thesis committee (09/05).

Amanda Palmer, candidate Ph.D., Johns Hopkins Bloomberg School of Public Health, Department of International Health. Role: On thesis committee (11/07).

Editorial Activities

- 1995-1997 Editorial Board, *Journal of Nutrition*
- 1998-present Editorial Advisory Board, Vitamins and Micronutrients, *Nutrition*
- 2005-2013 Associate Editor, *Journal of Gerontology Medical Sciences*
- 2009 Guest Editor, *Journal of Nutrition*. Supplement: "The Impact of Climate Change, the Economic Crisis, and the Increase in Food Prices on Malnutrition."
- 2012 Guest Editor, *Annals of Nutrition & Metabolism*. "The Discovery of the Vitamins: 100th Anniversary Special Issue" Volume 61, Number 3.
- 2014 Guest Editor, *Proteomics Clinical Applications*, Focus Issue "Proteomics and the Eye" Volume 7, March/April 2014
- Journal peer reviewer: *Lancet, Journal of Infectious Diseases, Journal of Pediatrics, Clinical Infectious Diseases, Journal of Nutrition, Nutrition, Haematologica, European Journal of Clinical Nutrition, American Journal of Clinical Nutrition, Public Health Nutrition, Clinical Trials, Tropical Medicine and International Health, International Journal of Vitamin and Nutrition Research, Journal of Gerontology A Biological Sciences Medical Sciences, BMJ, Proteomics-Clinical Applications*

CLINICAL ACTIVITIES

Certification

- 1984 Diplomate of the National Board of Medical Examiners (267313).
- 1987 Physician and Surgeon, Board of Medical Examiners of the State of Maryland (D35251).
- 1991 Diplomate of the American Board of Ophthalmology

Service Responsibilities

- 1989-2008 General Ophthalmology, Comprehensive Eye Service
- 1993-2008 Division of Ocular Immunology
- 2008-2015 General Ophthalmology, Wilmer Eye Institute at Green Spring Station

ORGANIZATIONAL ACTIVITIES

Institutional Administrative Appointments:

1995-1998	Medical Student Education Committee, Department of Ophthalmology, The Johns Hopkins School of Medicine
1995-2004 Protocol Review	Subcommittee for the Adult General Clinical Research Center, Committee, The Johns Hopkins School of Medicine
1995-1997	Wilmer Research Meeting Committee, Department of Ophthalmology, The Johns Hopkins School of Medicine
1999-present Hopkins	Wilmer Library Committee, Department of Ophthalmology, The Johns Hopkins School of Medicine
1999-2006 Ophthalmology, The	Associate Professor Promotions Committee, Department of Ophthalmology, The Johns Hopkins School of Medicine.
2006-2010	New Wilmer Building (Robert and Clarice Smith Building), Laboratory Planning Committee, Department of Ophthalmology, The Johns Hopkins School of Medicine

Professional Societies, since:

1984	American Academy of Ophthalmology
1984	Wilmer Residents Association
1994-2005	American Institute of Nutrition
1994-2005	American Society for Clinical Nutrition
2013	American Society for Nutrition
1995-2003	American Association for the History of Medicine
1996	Society for International Nutrition Research
1999-2007	International Society for Research on Human Milk and Lactation
2002	Gerontological Society of America
2012	U. S. Human Proteome Organization
2013	American Society for Mass Spectrometry

Advisory Committees/Review Groups/Consultantships:

1992 Epidemiological	World Health Organization Task Force Group for the Characterization of Onchocerciasis, Pan American Health
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Organization,

Washington, D.C.
1999-2002 Board of Directors, Dwight Hall Center for Social Justice, Yale
University
2002-present Women's Eye Health Task Force, Schepens Eye Research Institute,
Harvard
Medical School
2003-2007 History of Nutrition Committee, American Society for Nutritional
Sciences
2004-2006 Regional Advisor, Helen Keller International Asia-Pacific Region
2006-2012 Consultant, United Nations World Food Programme, Rome, Italy
2007 Aging Systems and Geriatrics Study Section (ASG), Center for
Scientific
Review, National Institutes of Health
2009 Ad-Hoc Study Section, National Institute on Aging
2013 Special Interest Group Study Section, National Institute on Aging

RECOGNITION

Awards

1973 Japanese-American Citizens League Scholarship Award
1978 *Cum laude*, Yale College
1978 Honors and Distinction in Biology, Yale College
1978 William R. Belknap Prize for Excellence in Biology, Yale College,
Biology
Department Prize
1980 Orinoco Foundation Fellowship (Tropical Medicine, Venezuela),
Stanford
University
1982 Tinker Foundation Graduate Fellowship in Latin American Studies
1987 Physician Scientist Award, National Institutes of Health (1987-
1992)
1992 Eli Lilly Clinician Scientist Award, Johns Hopkins University
School of
Medicine (1992-1994)
2002 John Kinney/Nestle Pediatric Nutrition Award, given to the
research team for the
scientific paper: Melikian G, Mmiro F, Ndugwa C, Perry R, Jackson
JB, Garrett
E, Tielsch J, Semba RD. Relationship of vitamin A and carotenoid
status to
growth failure and mortality among human immunodeficiency virus-
infected
infants in Uganda. *Nutrition* 2001; 17: 567-572.

2006 Lew R. Wasserman Merit Award, Research to Prevent Blindness
2007 Inaugural W. Richard Green Professor of Ophthalmology

Invited Talks

January 9, 1995 Guest Speaker, Tropical Medicine Dinner Club, Department of
International
 Health, School of Public Health, University of Alabama,
Birmingham, on
 "Vitamin A and AIDS: Prevention and Vertical Transmission of HIV
Infection"

February 2, 1995 Roundtable Symposium on Prevention of Perinatal HIV Transmission
in
 the Post-ACTG 076 Era: Interventions Applicable to the Developing
World, 2nd
 National Conference on Human Retroviruses and Related Infections,
American
 Society for Microbiology, Washington, D.C., on "Micronutrients,
Vitamin A and
 Perinatal Transmission."

February 23, 1995 Guest Speaker, Late Breakers Session, Conference on HIV Infection
in Women:
 Setting a New Agenda, Philadelphia Sciences Group, Washington,
D.C., on
 "Vitamin A Deficiency, Infant Mortality, and Mother-to-Child
Transmission of
 HIV."

May 2-3, 1995 Visiting Professor, Departments of Epidemiology and
Medicine, University
 of Washington, Seattle, on "Effects of Nutritional Factors on
Infection" and "
 "Vitamin A and HIV Infection."

November 7, 1995 Guest Speaker, Second International Symposium on HIV Infection in
Mothers and Children, Valencia, Spain, on "The Potential Role of
Vitamin A in
 Reducing Mother-to-Child Transmission of HIV."

March 10, 1996 Guest Speaker, Frederick Berman Memorial Seminar, on "Eye
Infections and
 Seasonal Eye Disorders."

March 14, 1996 Guest Speaker, Centers for Disease Control, Atlanta, on "The Role of Vitamin A in Perinatal Transmission."

April 17, 1996 Guest Speaker, Vaccine Development Center, University of Maryland, Baltimore, on "Vitamin A."

April 25, 1996 Guest Speaker, Plenary Session, Meeting of the International Centers for Infectious Diseases Research, National Institutes of Health, Bethesda, on "Nutrition and Infection."

May 16, 1996 Guest Speaker, Seminar on Vitamin A Relationships to Mortality in HIV Disease and Effects on HIV Transmission: Recent and Late Breaking Studies, Office of AIDS Research, National Institutes of Health, Bethesda, Maryland, on "Vitamin A and HIV Infection."

May 21, 1996 Guest Speaker, Nutrition and Immune Function, Committee on Military Nutrition Research, Food and Nutrition Board, Institute of Medicine, Fort Detrick, Maryland, on "Vitamin A and Immune Function."

May 29, 1996 Guest Speaker, Center for Vaccine Development, University of Maryland, Baltimore, on "Vitamin A as an Immune Enhancer."

June 26, 1996 Guest Speaker, Nutrition Society of the United Kingdom, University of Ulster, Coleraine, Northern Ireland, on "Vitamin A and Infection."

November 25, 1996 Guest Speaker, School of Public Health, Harvard University, Cleveland, Ohio, on "Vitamin A and AIDS."

February 24, 1997 Guest Speaker, School of Medicine, Case Western Reserve University, Cleveland, Ohio, on "Vitamin A and AIDS."

April 22, 1997 Guest Speaker, Department of Epidemiology, University of

Washington, Seattle,
on "Nutrition, Immunity, and Infection."

May 5, 1997 Guest Speaker, International Life Sciences Conference on
Nutrition and Immunity, Emory University, Atlanta, on "Vitamin A and Immune
Function."

August 1, 1997 Guest Speaker, 16th International Congress of Nutrition,
Montreal, Canada, on
"Micro nutrients and the Pathogenesis of HIV/AIDS."

September 4, 1997 Guest Speaker, Conference on Global Strategies for the Prevention
of HIV from Mother to Infants, Crystal City, Virginia, on "Impact of
Nutritional Interventions."

November 13, 1997 Guest Speaker, **The Ghent Lecture**, Fourth Meeting of the
International Working Group on Mother-To-Child Transmission of
HIV, Ghent, Belgium, on
"Micro nutrients: A Simple Strategy to Reduce Mother-To-Child
Transmission of
HIV?"

March 23, 1998 Guest Speaker, Conference on Nutrition and AIDS, Tufts University,
on
"Vitamin A and HIV Infection."

May 17, 1998 Guest Speaker, International Congress of Infectious Diseases,
Boston, Massachusetts, on "Vitamin A, Immunity, and Infection."

May 30, 1998 Guest Speaker, Conference on Women and HIV Infection, Mt. Sinai
Hospital, New York, New York, on "Micro nutrients and HIV Infection in
Women."

June 24, 1998 Guest Speaker, Seminar in the History of Medicine,
National Library of Medicine, Bethesda, Maryland, on "The Rise and Fall of Vitamin A
as 'Anti-
Infective' Therapy, 1920-1940."

August 8, 1998 Guest Speaker, XXII International Congress of Pediatrics,
Amsterdam, The

- Netherlands, on “Vitamin A, the Immune Response, and Infectious Diseases in Children.”
- November 10, 1998 Guest Speaker, Third International Symposium on HIV Infection in Mothers and Children, Valencia, Spain, on “Vitamin A and Breastfeeding.”
- December 4, 1998 Guest Speaker, British Society of Immunology Annual Meeting, Harrogate, England, on “Vitamin A and Immune Function.”
- September 3, 1999 Guest Speaker, Second Annual Meeting on Global Strategies for the Prevention of HIV Transmission from Mother to Infants, Montreal, Canada, on “Mastitis and HIV Transmission Through Breast Milk.”
- September 9, 2000 Guest Speaker, 38th Annual Meeting of the Infectious Diseases Society of America, New Orleans, Louisiana, on “Immune Modulation by Vitamin A.”
- November 13, 2001 Guest Speaker, Plenary Session on Nutrition and the Eye, American Academy of Ophthalmology, New Orleans, Louisiana, on “Prevention of Nutritional Blindness with Vitamin A.”
- June 12, 2002 Guest Speaker, 28th Annual Meeting of the Spanish Society of Immunology, Valladolid, Spain, on “Vitamins and Micronutrients: Their Role in Immune Function”
- October 28, 2003 Guest Speaker, 54th Nestlé Nutrition Workshop: “Micronutrient Deficiencies in the Weaning Period and the First Years of Life,” on “Micronutrient Deficiencies and Immune Function,” São Paulo, Brazil.
- November 7, 2003 Guest Speaker, Symposium: “Improving Women’s Eye Health: Strategies to Address the Greater Burden of Blindness Among Women,” on “Nutritional Factors and Eye Disease,” Harvard Club, Boston, Massachusetts.

September 17, 2004 Guest Speaker, Symposium: "The Challenge of Understanding and Studying Frailty: Results of Canadian, European and American Initiatives on Frailty," on "Report from the 2004 American Geriatrics Society/National Institutes of Aging Conference on Frailty Research," Third Congress of the European Union Geriatric Medicine Society, Vienna, Austria.

May 23, 2005 Guest Speaker, Department of Epidemiology, University of Washington, Seattle, on "Nutrition, Immunity, and Infection."

November 21, 2005 Guest Speaker, Discussant, Symposium on Oxidative Stress and Aging, 58th Annual Scientific Meeting of the Gerontological Society of America Meeting, Orlando, Florida

April 10, 2006 Gallery Talk, George Peabody Library, Johns Hopkins University, on "A Perfect Vision: the Rare Book Collection of William Holland Wilmer"

May 12, 2006 **Inaugural Susruta Lectureship**, Wilmer Residents Association Meeting, on "History and Ethics in Ophthalmology: What We Can Learn from the Wilmer Rare Book Collection"

January 9, 2007 Guest Speaker, Sixth Gordon Conference on Carotenoids, Ventura, California, on "Relationship of Carotenoids to Muscle Strength and Physical Performance in Older Adults"

May 8, 2007 Guest Speaker, Department of Epidemiology Monthly Seminar, University of Washington, Seattle, Washington, on "The Free Radical Theory of Aging: New Evidence from Cohort Studies in the U.S. and Italy"

July 11, 2007 Guest Speaker, European Nutrition Congress, Paris, France, on "The Role of Nutritional Interventions During Infections"

- September 11, 2007 Guest Speaker, XXII Conference on Nutrition and Aging: Frailty in Older Adults, Little Rock, Arkansas, on “The Free Radical Theory of Aging: New Evidence from Cohort Studies in the U.S. and Italy”
- February 1, 2008 Keynote Speaker, All-India Ophthalmological Society Meeting, Bangalore, India, on “The 20% Solution: Vitamin A Program Coverage to Prevent Blindness and Mortality in India.”
- March 18, 2008 Guest Speaker, Grand Rounds, Division of Nephrology, Department of Medicine, University of Maryland School of Medicine, on “Advanced Glycation End Products: A Novel Risk Factor for Chronic Kidney Disease?”
- May 16, 2008 Keynote Speaker, 25th Annual Wilmer Nursing Conference, Johns Hopkins University, Baltimore, Maryland, on “Nutritional Blindness in Developing Countries”
- November 10, 2008 Guest Speaker, American Heart Association Meeting, New Orleans, Louisiana, on “Carboxymethyl-lysine (CML): a Predictor for Cardiovascular Mortality in Older Adults”
- November 22, 2008 Guest Speaker, Gerontological Society of America Meeting, National Harbor, Maryland, on “Oxidative Stress and Inflammation in Aging: The Role of the AGE-RAGE Pathway”
- January 25, 2009 Guest Speaker, Symposium on the Impact of Climate Change, the Economic Crisis, and the Increase in Food Prices on Malnutrition, World Food Programme, Castelgandolfo, Italy “Relationship of Household Food Expenditures to Morbidity and Mortality in Bangladesh”
- March 23, 2009 **Distinguished Lecture in Nutritional Science**, Institute of Human Nutrition, College of Physicians & Surgeons, Columbia University, New York, New York on “Advanced Glycation End Products in the Diet: Do They Accelerate Aging?”

- June 4, 2009 Guest Speaker, National Institute on Aging Summer Planning Retreat, Bethesda, Maryland, on “Advanced Glycation End Products and Aging”
- November 21, 2009 Guest Speaker, Gerontological Society of America Meeting, Atlanta, Georgia, on “Serum 25-Hydroxyvitamin D Levels Predict Walking Speed in Older Adults”
- March 19, 2010 Guest Speaker, Oxygen Club of California Meeting, Santa Barbara, California, on “Beta-Carotene 15,15’ -Monooxygenase Gene 1 Affects Circulating Levels of Carotenoids”
- October 26, 2010 Guest Speaker, USDA Human Nutrition Research Center, Beltsville, Maryland on “Do Dietary Advanced Glycation End Products Play A Role in Chronic Diseases?”
- September 23, 2010 Guest Speaker, Second International Congress of Public Health Nutrition, Porto, Portugal “The Historical Evolution of Thought Regarding Multiple Micronutrient Nutrition”
- November 30, 2012 Guest Speaker, 100th Anniversary of the Discovery of the Vitamins Symposium, Sight and Life, Basel, Switzerland “On the Discovery of the Vitamins”