

BIOGRAPHICAL SKETCH

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NAME Nayak, Debi P.		POSITION TITLE Distinguished Professor Emeritus	
eRA COMMONS USER NAME nayak2			
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
Univ. of Calcutta, India	B.V.Sc.	1957	Veterinary Medicine
Univ. of Nebraska, Lincoln, Nebraska	M.S.	1963	Veterinary & Microbio.
Univ. of Nebraska, Lincoln, Nebraska	Ph.D.	1965	Virology

A. Positions and Honors.

1958 - 1961	Instructor, Dept. of Pathology, Bengal Veterinary College, India
<u>1961 - 1964</u>	<u>Graduate Res. Asst., University of Nebraska, Lincoln, Dept. Veterinary Med.</u>
1964 - 1966	Acting Asst. Prof., University of California, Los Angeles
1966 - 1968	Asst. Res., Virology, University of California, Los Angeles
1968 - 1971	Asst. Prof., Virology, University of California, Los Angeles
1971 - 1977	Assoc. Prof., Virology, University of California, Los Angeles
1977 - 2004	Professor, Virology, University of California, Los Angeles
2004- 2008	Distinguished Professor, University of California, Los Angeles
2008-PRESENT	Distinguished Professor Emeritus, University of California, Los Angeles

HONORS AND MEMBERSHIPS

Graduated B.V.Sc with Honors & distinction and placed first in order of merit
Senior Dernham Fellow, Calif. Division of the American Cancer Society, 1969-74
NIH Research Career Development award, 1969-74 (declined)
Member, Editorial Board, Virus Research
Member, Experimental Virology Study Section, NIH 1986-90
Member, Microbiology and Infectious Disease Review Committee, NIAID, NIH 1991-94
Chair-Elect, Division T (RNA viruses) ASM 1992-93
Chair, Division T (RNA virus) ASM 1993-94
Adhoc Member, HIV Study Section on Vaccine, NIAID, 1998.
Adhoc Member, Experimental Virology Study section, 2001
Adhoc Member, The Wellcome Trust, 2002
Reviewer, Binational Science foundation (US-Israel), 2002
Reviewer, National Science Foundation, 2002
Member, Special NIH Study Section, 2002
Reviewer, The Wellcome Trust grant application, 2002
NIH/NIAID Panel on controlling human respiratory pathogens, 2003
NIH/NIAID Panel on Biodefense and Emerging Infectious Diseases, 2003
NIH/NIAID Panel on Vaccine 2004
NIH/NIAID Virology Study Section B 2005
NIH/NIAID Panel, Immune mechanism of virus control 2007-2008
ORAU review Panel, Next-Generation Vaccines and Therapeutics 2009

B. Selected Publications.

Kundu A, **Nayak DP.** (1994) Analysis of the signals for polarized transport of influenza virus (A/WSN/33) neuraminidase and human transferrin receptor, type II transmembrane proteins. *J. Virol.* 68:1812-1818.

- Senderson CM, Avalos R, Kundu A, **Nayak DP**. (1995) Interaction of Sendai viral F, HN, and M proteins with host cytoskeletal and lipid components in Sendai virus-infected BHK cells. *Virology* 209:701-707.
- Kundu AK, Avalos RT, Sanderson CN, **Nayak DP**. (1996) Transmembrane domain of influenza virus neuraminidase, a type II protein, possesses determinant for sorting to apical plasma membrane. *J. Virol.* 70:6508-6515.
- Nayak DP**. (1996) Assembly and Morphogenesis of Orthomyxo- and Paramyxoviruses. *ASM News* 62:411-414.
- Biswas SK, **Nayak DP**. (1996) Influenza virus polymerase basic protein 1 interacts with influenza virus polymerase basic protein 2 at multiples sites. *J. Virol.* 70:6716-6722.
- Avalos R, Yu Z, **Nayak DP**. (1997) Association of influenza virus NP and M1 proteins with cellular cytoskeletal elements in influenza virus infected cells. *J. Virol.* 71:2947-2958.
- Nayak DP**. (1997) Influenza virus infection. *In: Encyclopedia of Human Biology* (Dulbecco R, ed). Vol. 4:479-491.
- Biswas SK, Boutz PL, **Nayak DP**. (1998) Influenza virus nucleoprotein interacts with influenza virus polymerase proteins. *J. Virol.* 72:5493-5501.
- Nayak DP**. (2000) Viral morphology, replication and assembly. *In: Viral Ecology* (Hurst C, ed) pp.63-124, Academic Press.
- Ali A, Avalos R, Ponimaskin E, **Nayak DP**. (2000) Influenza virus assembly: the effect of influenza viral glycoproteins on the membrane-association of M1 protein. *J. Virol.* 74:8709-8719.
- Barman S, **Nayak DP**. (2000) Analysis of the transmembrane domain of influenza virus neuraminidase, a type II transmembrane glycoprotein, for apical sorting and raft association. *J. Virol.* 74:6538-6545.
- Ali A, **Nayak DP**. (2000) Assembly of Sendai virus: M protein interacts with the cytoplasmic tail and transmembrane domain of F protein. *Virology* 276:289-303.
- Barman S, Ali A, Hui EKW, Adhikari L, **Nayak DP**. (2001) Transport of viral glycoproteins to the apical membranes and interaction of matrix protein with glycoproteins in the assembly of influenza virus. *Virus Res.* 77:61-69.
- Hui EKW, **Nayak DP**. (2001) Role of ATP in influenza virus budding. *Virology* 290:329-341.
- Nayak DP**. (2001) Virulence of 1918 pandemic influenza virus. *ASM News* 67:386-387.
- Van Lenten BJ, Wagner AC, **Nayak DP**, Hama S, Navab M, Fogelman AM. (2001) High-density lipoprotein loses its anti-inflammatory properties during acute influenza infection. *Circulation* 103:283-2288.
- Van Lenten BJ, Wagner AC, Anantharamaiah GM, Garber DW, Fishbein MC, Adhikary L, **Nayak DP**, Hama S, Navab M, Fogelman AM. (2002) Influenza infection promotes macrophage traffic into arteries of mice that is prevented by D-4F, an apolipoprotein A-I mimetic peptide. *Circulation* 106:1127-1132.
- Nayak DP**, Hui EKW. (2002) Assembly and Morphogenesis of Influenza virus. *Recent Res. Develop. Virol.* 4:35-54.
- Hui EKW, **Nayak DP**. (2002) Role of G protein and protein kinase signaling in influenza virus budding in MDCK cells. *J. Gen. Virol.* 83:3055-3066.
- Nayak DP**, Barman S. (2002) Role of lipid raft assembly and budding site on viral pathogenesis. *Adv. Virus Res.* 58:1-28.
- Barman S, Adhikary L, Kawaoka Y, **Nayak DP**. (2003) Influenza A virus hemagglutinin containing basolateral localization signal does not alter the apical budding of a recombinant influenza virus in polarized MDCK cells. *Virology* 305:138-152.
- Hui EKW, Ralston K, Judd AK, **Nayak DP**. (2003) Conserved cysteine and histidine residues of the putative zinc finger motif of influenza virus M1 protein are not critical for influenza virus replication. *J. Gen. Virol.* 84:3105-3113.
- Barman S, Adhikary L, Chakrabarti AK, Bernas C, Kawaoka Y, **Nayak DP**. (2004) Role of transmembrane domain and cytoplasmic tail amino acid sequences of influenza A virus neuraminidase in raft association and virus budding. *J. Virol.* 78:5258-5269.
- Nayak DP**, Hui EKW. (2004) The role of lipid microdomains in virus biology. *In: Subcellular Biochemistry*, vol. 37, Membrane dynamics and domains (Quinn PJ, ed), chapter 14, pp.443-491. Kluwer Academic/Plenum Publishers, New York.
- Hui EKW, Yap EM, An DS, Chen ISY, **Nayak DP**. (2004) Inhibition of influenza virus matrix (M1) protein expression and virus replication by U6 promoter-driven and lentivirus-mediated delivery of siRNA. *J. Gen. Virol.* 85:1877-1884.

- Nayak DP**, Hui EKW, Barman S. (2004) Assembly and budding of Influenza virus. *Virus Res.* 106:147-165.
- Van Lenten BJ, Wagner AC, Navab M, Anantharamaiah GM, Hui EKW, **Nayak DP**, Fogelman AM. (2004) D-4F, an apolipoprotein A-I mimetic peptide, inhibits inflammatory response induced by influenza A virus infection of human type II pneumocytes. *Circulation* 110:3252-3258.
- Nayak DP**, Barman S, Hui EKW. (2006) Influenza virus budding: the role of host and virus components. *In: Influenza Virus – Facts and Perspectives* (Schmidt M, ed), pp.62-71. Grosse Verlag, Berlin, Germany..
- Nayak DP, Barman S, **Hui EKW**. (2006) Influenza virus budding: the role of host and virus components. *In: Influenza Virus – Facts and Perspectives* (Schmidt M, ed), pp.62-71. Grosse Verlag, Berlin, Germany.
- Hui EKW**, Smee DF, Wong MH, Nayak DP. (2006) Mutations in influenza virus M1 CCHH zinc finger motif cause attenuation in mice and protect mice against lethal influenza infection. *J. Virol.* 80:5697-5707 .
- Barman S and Nayak DP(2007)** Lipid raft disruption by cholesterol depletion enhances influenza A virus budding from MDCK cells. *J. Virol* 81(22):12169-78.
- Nayak DP**, Balogun RA, Yamada H, Zhou ZH, Barman S (2009). Influenza virus morphogenesis and budding. *Virus Res.* 2009 May 27. [Epub ahead of print]