

CURRICULUM VITAE (2010)

NAME Dale Lynn Barnard

SPECIALIZATION Antiviral Chemotherapy

EDUCATION

<u>Institution</u>	<u>Major Field</u>	<u>Dates Attended</u>	<u>Degree Date</u>	<u>Degree</u>
Weber State College	Microbiology	1973 - 1977	1977	B.Sc.
Idaho State University	Microbiology/ Biochemistry	1977 - 1979	1979	M.S.
Brigham Young Univ.	Microbiology/Biochemistry	1979 - 1987	1987	Ph.D.
Utah State University	Antiviral Chemotherapy	1987 - 1988		Post doc.

RESEARCH AND TEACHING EXPERIENCE

<u>Position</u>	<u>School or Company</u>	<u>Place</u>	<u>Dates</u>
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RESEARCH

Research Asst.	Dept. of Microbiology	Brigham Young Univ.	1979-1987
Lab Technician	Clinical Research Associates	Provo, UT	Mar-May 1981
Lab Technician	Utah State Health Department, Utah County	Provo, UT	May-Sept 1983
Res. Assist. Prof.	Dept. of ADVS	Utah State Univ.	1988-1996
Res. Assoc. Prof.	Dept. of ADVS	Utah State Univ.	1997 to Present
Adjunct Prof.	Biology Department	Utah State Univ.	2003-Present

TEACHING

Teaching Asst.	Dept. of Microbiology and Biochemistry/ Nursing Microbiology, Microbial Phys.	Idaho State Univ.	1977-1979
Instructor	Dept. of Microbiology/Virology, Microbiology	Brigham Young Univ.	1979-1987
Instructor	Div. of Continuing Education, Microbiology	Snow College	1983
Instructor	Dept. of ADVS/Veterinary Virology	Utah State Univ.	1991-1993
Instructor	Continuing Education/Microbiology	Utah State Univ.	Summer 1998
Instructor	Honors Program/Agricultural Microbiology	Utah State Univ.	1998/1999
Instructor	Biology Department/Microbiology	Utah State Univ.	1998-2006
Instructor	Continuing Education/Microbiology	Utah State Univ.	1999-2009

PROFESSIONAL SOCIETY MEMBERSHIPS

International Society for Antiviral Research
American Society for Microbiology
American Society for Microbiology-Intermountain Branch
American Society for Virology

Sigma Xi Research Society
Sigma Xi Research Society-Local USU Chapter

OTHER PROFESSIONAL ACTIVITIES

1. Served as a member of the NIH/CDC task force on SARS (2003-2004)
2. Serving as an ad hoc reviewer for the Utah Agricultural Experiment Station (1997-present)
3. Served on American Distance Education Consortium Agricultural Telecommunications peer review panel (1999-2003)
4. Serving on a grant review panel for the Arizona Disease Control Research Commission (2000-present)
5. Serving on an NIH Challenge Grant peer-review study section: Joint ventures in biomedicine and biotechnology, Vaccines and therapeutics for emerging infections (2002-2005)
6. Serving as an ad hoc reviewer for the NIAID Partnerships in Biodefense Initiative (2003-present)
7. Serving on the NIAID Viral and Eucaryotic Pathogen Special Emphasis Panel (2006-present)
8. Serving on proposal reviewer for US civilian Research and Development Foundation (2006-present)
9. Serving on a grant review panel for the National Medical Research Council of Singapore (2005-present)
10. Serving as Editor of Antiviral Research
11. Serving on the Editorial Boards of Antiviral Chemistry & Chemotherapy (2007-present), Journal of Antimicrobial Agents and Chemotherapy (2008-present), and Future Virology (2005-present), Frontiers in Virology (2010)
12. Serving as ad hoc reviewer for the journals Current Drugs, Journal of the American Veterinary Association, Bioorganic & Medicinal Letters, and Journal of Medicinal Chemistry, Journal of Virological Methods, Journal of Clinical Microbiology, Journal of Infectious Diseases, FEBS Letters, Clinical and Vaccine Immunology

13. Faculty advisor to student chapter of the American Society for Microbiology-Intermountain Branch (1999-2006)

Professional Society Offices Held

President-Intermountain Branch of the American Society for Microbiology (1994-1995)

President-Elect-Intermountain Branch of the American Society for Microbiology (2000-2001)

President-Intermountain Branch of the American Society for Microbiology (2001-2002)

Member of Placement Committee for the International Society for Antiviral Research (2003-2007)

Treasurer of the International Society for Antiviral Research (2007-2010)

Awards

Utah State University International Student Council Professor of the Year (1999-2000)

Utah State University Mortar Board Top Professor (1999-2000)

Grants Awarded

<u>Title</u>	<u>Date</u>	<u>Agency</u>	<u>Amount</u>	<u>PI</u>	<u>Co-PI</u>
1. In vitro antiviral screen for respiratory viruses, biodefense viruses and SARSCoV	10/1/2003-9/30/2010	NIAID-NIH	\$1,000,000/yr	D.F. Smee	D.L. Barnard
2. Mouse Models for Influenza (Subcontract from Southern Research Institute)	5/1/2008-10/30/2010 (supplemental funds for SARS-CoV)	NIAID-NIH	\$1,157,137	J.D. Morrey on D.L. Barnard subcontract	
3. Animal models of human viral Infections for evaluation of experimental therapies	10/1/2006-03/30/2010 (includes supplemental funds for SARS-CoV)	NIAID-NIH	\$1,050,000/yr	J.D. Morrey	D.L. Barnard
4. In vitro antiviral screen for respiratory viruses, biodefense viruses and SARSCoV	1/1/2005-12/31/2010	Pharmaceutical Companies	\$50,000/yr	D.L. Barnard	-
5. Evaluation of anti-respiratory virus therapies in animal	1/1/2005-12/31/2010	Pharmaceutical Companies	\$125,000/yr	D.L. Barnard	-

models

6. A nanoparticle immunoprophylactic strategy for a broad spectrum of lung viruses	07/1/2010-06/30/11	ARRA-NIAID-NIH	\$121,264	A. Harmsen	D.L. Barnard
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Publications (81 total)

1. Barnard, D.L., F.B. Johnson, and D.F. Richards. 1985. Comparison of an avidin-biotin immunoassay with three commercially available immunofluorescence kits for typing of herpes simplex virus. *J. Clin. Pathol.* **38**: 1158-1162. PMID: 2997305
2. Barnard, D.L., K. Farnes, D.F. Richards, G.E. Croft, and F.B. Johnson. 1986. Suitability of new chlamydia transport medium for transport of herpes simplex virus. *J. Clin. Microbiol.* **24**: 692-695. PMID: 3021811
3. Sidwell, R.W., J.H. Huffman, D.L. Barnard, M. Kende, and D.Y. Pifat. 1989. Effects of ribamidine, a 3-carboxamidine derivative of ribavirin on experimentally-induced *Phlebovirus* infections. *Antiviral Res.* **10**: 193-208. PMID: 2976263
4. Sidwell, R.W., J.H. Huffman, **D.L. Barnard** and E.J. Reist. 1989. Effect of phosphonic acid analogs of acyclovir and ganciclovir on in vitro cytomegalovirus infections. *Nucleosides and Nucleotides.* **8**: 1159-1160.
5. Barnard, D.L., J.H. Huffman, J.L.B. Morris, R.W. Sidwell and E.J. Reist. 1989. The effects of human cytomegalovirus (HCMV) inhibitory agent, 9-(3'-phosphono-1'-hydroxymethyl-1'-propyloxymethyl)guanine (SR3745), on macromolecular synthesis and in vitro antiviral activity in human diploid cells. *The Pharmacologist* **31**: 166.
6. Barnard, D.L., J.H. Huffman, J.L.B. Morris, S.G. Wood, B.G. Hughes and R.W. Sidwell. 1992. Evaluation of the antiviral activity of anthraquinones, anthrones and anthraquinone against human cytomegalovirus. *Antiviral Research.* **17**: 63-77. PMID: 1310583
7. Smee, D.F., J.L.B. Morris, **D.L. Barnard** and A. V. Aerschot. 1992. Selective inhibition of arthropod-borne and arenaviruses in vitro by 3'-fluoro-3'-deoxyadenosine. *Antiviral Res.* **18**: 151-162. PMID: 1365816
8. Barnard, D.L., J.H. Huffman, J.L.B. Morris, S.G. Wood, B.G. Hughes and R.W. Sidwell. 1992. Evaluation of the antiviral activity of anthraquinones, anthrones and anthraquinone against human cytomegalovirus. *Rec. Adv. Chemother.* **1**: 1772-1773.

9. Barnard, D.L. and F.B. Johnson. 1992. Topographical analysis of the ADV-G virion using monoclonal antibodies. *Arch. Virol.* **127**: 271-289. PMID: 1280944
10. Jackson, M.J., L.C. Ellis, J.D. Morrey, J.D. and **D.L. Barnard**. 1992. Early detection of Aleutian mink disease virus in mink by polymerase chain reaction. *Nor. J. Agr. Sci. Supplement 9*: 385-387.
11. Jackson, M.K., L.C. Ellis, J.D. Morrey and **D.L. Barnard**. 1993. Detection of Aleutian disease virus in natural infections. *Faseb J.* **7**: A502.
12. Ellis, L.C., M.J. Jackson, J.D. Morrey, **D.L. Barnard** and Z-Z. Li. 1993. Aleutian disease: Current status and developments. *Blue Book of Farming*. pp. 4-5.
13. Barnard, D.L., J.H. Huffman, R.W. Sidwell and L.R. Meyerson. 1993. Anti-herpesvirus activity and mode of action of SP-303, a novel plant flavonoid. *Chemotherapy* **39**: 203-211. PMID: 7685261
14. Barnard, D.L., D.F. Smee, J.H. Huffman, R.W. Sidwell and L.R. Meyerson. 1993. Mode of inhibition of respiratory syncytial virus by a plant flavonoid, SP-303. *Chemotherapy*. **39**: 212-217. PMID: 8508691
15. Barnard, D.L., J.H. Huffman, R.W. Sidwell and E.J. Reist. 1993. Selective inhibition of cytomegaloviruses by 9-(3'-ethyl phosphonyl-1'-hydroxymethyl-1'-propyloxy-methyl)guanine. *Antiviral Res.* **22**: 77-89. PMID: 1365816
16. Sidwell, R.W., J.H. Huffman, **D.L. Barnard**, D.F. Smee, R.P. Warren, M.A. Chirigos, M. Kende and J. Huggins. 1994. Antiviral and immunomodulating inhibitors of experimentally-induced Punt Toro virus infections. *Antiviral Res.* **25**:105-122. PMID: 7847873
17. Ubillas, R., S.D. Jolad, R.C. Bruening, M.R. Kernan, S.R. King, D.F. Sesin, M. Barrett, C.A. Stoddart, T. Flaster, J. Kuo, F. Ayala, E. Meza, M. Castanel, D. McMeekin, E. Rozhon, M.S. Tempesta, **D. Barnard**, D. Smee, R. Sidwell, K. Soike, A. Brazier, S. Safrin, R. Orlando, P.T.M. Kenney, N. Berova, and K. Nakinishi. 1994. SP-303, an antiviral oligomeric protanthocyanidin from the latex of *Croton lechleri* (Sangre de Drago). *Phytomed.* **1**:77-106.
18. Sidwell, R.W., J.H. Huffman, **D.L. Barnard**, D.F. Smee, R.P. Warren, M. Kende and J.W. Higgins. 1995. Murine Punta Toro virus infection: a potential model for study of Hantavirus inhibitors. *Inter. Antiviral News.* **3**:33-36.
19. Barnard, D.L., D.W. Fairbairn, K.L. O'Neill, T.L. Gage and R.W. Sidwell. 1995. Anti-human cytomegalovirus activity and toxicity of sulfonated anthraquinones and anthraquinone derivatives. *Antiviral Res.* **28**: 317-329. PMID: 8669891

20. Ellis, L.C., M.K. Jackson and D.L. Barnard. 1996. Aleutian Disease: How it is spread and possible treatments. *Blue Book of Farming*. pp. 18-20.
21. Jackson, M.K., L.C. Ellis, J.D. Morrey, Z.-Z. Li, D.L. Barnard. 1996. Progression of Aleutian disease in natural and experimentally induced infections of mink. *Am. J. Vet. Res.* 12: 1753-1758. PMID: 8950430
22. Huffman, J.H., R.W. Sidwell, **D.L. Barnard**, A. Morrison, M.I. Otto, C.L. Hill and R.F. Schinazi. 1997. In vitro influenza virus-inhibitory effects of a series of germanium- or silicon-centered polyoxometalates. *Antiviral Chem. Chemother.* 8: 75-83.
23. Barnard, D.L., C.L. Hill, T.L. Gage, J.L. Matheson, J.H. Huffman, R.W. Sidwell, M.I. Otto and R.F. Schinazi. 1997. Potent inhibition of respiratory syncytial virus by polyoxometalates of several structural classes. *Antiviral Res.* 34: 27-37. PMID: 9107383
24. Barnard, D.L., N. Bischofberger, C.U. Kim, J.H. Huffman, R.W. Sidwell, J.P. Dougherty, W. Lew, M.A. Williams, W. Yang. 1997. Acyclic phosphonmethylether nucleoside inhibitors of respiratory viruses. *Antiviral Chem. Chemother.* 8: 223-233.
25. Sidwell, R.W., J.H. Huffman, **D.L. Barnard**, K.W. Bailey, M-H.Wong, A. Morrison, T. Syndergard and C.U. Kim. 1998. Inhibition of influenza virus infections in mice by GS4104, an orally effective influenza virus neuraminidase inhibitor. *Antiviral Res.* 37: 107-120. PMID: 9588843
26. Player, M.R., D.L. Barnard and P.F. Torrence. 1998. Potent inhibition of respiratory syncytial virus replication using a 2-5A-antisense chimera targeted to signals within the virus genomic RNA. *P.N.A.S., USA.* 95: 8874-8879. PMID: 9671772
27. Lin, Y.M., Flavin, M.T., Schure, R., Chen, F.C., Sidwell, R., **Barnard, D.L.**, Huffman, J.H. and Kern, E.R. 1999. Antiviral activities of biflavonoids. *Planta Med.* 65: 120-125. PMID: 10193201
28. Barnard, D. L., R.W. Sidwell, W. Xiao, M. R. Player, S. Adah and P. F. Torrence. 1999. 2-5A-antisense inhibition of respiratory syncytial virus replication: Effects of oligonucleotide structure modifications and RNA target site selection. *Antiviral Res.* 41: 119-134. PMID: 10320045
29. Barnard, D.L. 1999. RSV vaccine (subunit) Wyeth-Lederle vaccines. *Current opinion in anti-infective investigational drugs.* 1: 627-631.
30. Mangel, W.F., Toledo, D.L., Brown, M.T., Ding, J., Sweet, R.M., **Barnard, D.L.**, and McGrath, W.J. 2000. Chapter 8, Adenovirus proteinase- antiviral target for triple-combination therapy on a single enzyme: Potential inhibitor binding sites. In *Handbook for Experimental Therapy*, von

der Helm, K., Korant, B.D. and Cheronis, J.C. (eds.), Vol. 140. Proteases as Targets for Therapy. Springer-Verlage, Berlin, pp145-158.

31. Barnard, D.L. 2000. RWJ-270201 BioCryst Pharmaceuticals/Johnson & Johnson. *Current Opinion in Investigational Drugs* 1:421-424. PMID: 11249693
32. Barnard DL. 2000. Technology evaluation: Sch-58500, Canji. *Curr. Opin. Mol. Ther.* 2000 2:586-92. PMID: 11249761
33. Barnard, D.L. 2000. Pegasys. *Current Opinion in Investigational Drugs.* 2:1530-1538. PMID: 11763153
34. Sidwell, R.W., Smee, D.F., Huffman, J.H., **Barnard, D.L.**, Bailey, K.W., Morrey, J.D., Babu, Y.S. 2001. In vivo influenza virus-inhibitory effects of the cyclopentane neuraminidase inhibitor RJW-270201. *Antimicrob Agents Chemother.* 45:749-757. PMID: 11181355
35. Smee, D.F., Huffman, J.H., Morrison, A.C., **Barnard, D.L.**, Sidwell, R.W. 2001. Cyclopentane neuraminidase inhibitors with potent in vitro anti-influenza virus activities. *Antimicrob Agents Chemother.* 45:743-748. PMID: 11181354
36. Barnard, D.L, Stowell, V., Seley, K.L., Hegde, V.R., Subha, R., Rajappan, P., Schneller, S.W. Smee, D.F. and Sidwell, R.W. 2001. Inhibition of measles virus replication by 5'-Nor carbocyclic nucleoside analogs. *Antiviral Chem. & Chemother.* 12: 221-230. PMID: 11771733
37. Mangel, W.F., McGrath, W.J., Brown, M.T., Baniecki, M.L., **Barnard, D.L.**, and Pang, Y.-P. 2001. A new form of antiviral combination therapy predicted to prevent resistance from arising, and a model system to test it. *Curr. Med. Chem.* 8: 933-939. PMID: 11375760
38. Baniecki, M.L., McGrath, W.J., McWhirter, S.M., Li, C., Toledo, D.L., Pellicena. P., **Barnard, D.L.**, Thorn, K.S., Mangel, W.F. 2001. Interaction of the human adenovirus proteinase with its 11-amino acid cofactor pVIc. *Biochemistry.* 2001 40:12349-12356. PMID: 11591154
39. Mangel, W.F., Brown, M.T., Baniecki, M.L., **Barnard, D.L.**, and McGrath, W.J. 2001. Prevention of viral drug resistance by novel combination therapy. *Current Opinion in Investigational Drugs* 2: 613-616. PMID: 11569932
40. Sidwell, R,W,, Wong, M,H,, Bailey, K,W,, Barnard, D,L,, Jackson, M,K,, and Smee, D.F. 2001. Utilization of alpha-1-acid glycoprotein levels in the serum as a parameter for in vivo assay of influenza virus inhibitors. *Antivir Chem Chemother.* 12: 359-365. PMID: 12018681

41. Zhang, N., Chen, H.M., Sood, R., Kalicharran, K., Fattom, A.I., Naso, R.B., **Barnard, D.L.**, Sidwell, R.W., and Hosmane, R.S. 2002. In vitro inhibition of the measles virus by novel ring-expanded ('fat') nucleoside analogues containing the imidazo[4,5-e]diazepine ring system. *Bioorg. Med. Chem. Lett.* 2: 3391-3394. PMID: 12419368
42. Barnard, D.L. 2001. *Genvir. Curr. Opin. Investig. Drugs.* 2: 622-623. PMID: 11569934
43. Smee, D.F., Morrison, A.C., **Barnard, D.L.**, and Sidwell, R.W. 2002. Comparison of colorimetric, fluorometric, and visual methods for determining anti-influenza (H1N1 and H3N2) virus activities and toxicities of compounds. *J. Virol. Methods.* 106:71-79. PMID: 12367731
44. Barnard, D.L. 2002. Interferon-alpha. *Curr. Opin. Investig. Drugs.* 3: 693-697. PMID: 12090541
45. Barnard, D.L., Xu, Z.Q., Stowell, V.D., Yuan H., Smee, D.F., Samy, R., Sidwell, R.W., Nielsen, M.K., Sun, L., Cao, H., Li, A., Quint, C., Deignan, J., Crabb, J., and Flavin, M.T. 2002. Coumarins and pyranocoumarins, potential novel pharmacophores for inhibition of measles virus replication. *Antivir. Chem. Chemother.* 13: 39-59. PMID: 12180648
46. Barnard, D.L. 2002. Viramidine. *Curr. Opin. Investig. Drugs.* 3: 1585-1589. PMID: 12476957
47. Watson, K.G., Brown, R.N., Cameron, R., Chalmers, D.K., Hamilton, S., Jin, B., Krippner, G.Y., Luttick, A., McConnell, D.B., Reece, P.A., Ryan, J., Stanislawski, P.C., Tucker, S.P., Wu, W.Y., **Barnard, D.L.**, and Sidwell, R.W. 2003. An orally bioavailable oxime ether capsid binder with potent activity against human rhinovirus. *J. Med. Chem.* 46: 3181-3184. PMID: 12852746
48. Barnard, D.L., Hubbard, V.D., Burton, J., Smee, D.F., Morrey, J.D., Otto, M.J., and Sidwell, R.W. 2004. Inhibition severe acute respiratory syndrome-associated coronavirus (SARS-CoV) by calpain inhibitors and β -D-N⁴-hydroxycytidine. *Antiviral Chem. & Chemother.* 15: 15-22. PMID: 15074711
49. Barnard, D.L., Hubbard, V.D., Smee, D.F., Sidwell, R.W., Watson, K.G.W., Tucker, S.P.T., and Reece, P.A.R. 2004. In vitro activity of expanded-spectrum pyridazinyl oxime ethers related to pirodavir: novel capsid-binding inhibitors with potent anti-picornavirus activity. *Antimicrob. Agents & Chemother.* 48: 1766-1772. PMID: 15105133
50. Barnard, D.L. 2004. Inhibitors of measles virus. *Antiviral Chem. & Chemother.* 15: 111-119. PMID: 15266893
51. Gowen, B.B., **Barnard, D.L.**, Smee, D.F., Wong, M.H., Pace, A.M., Jung, K.H., Winslow, S.G., Bailey, K.W., Blatt, L.M., Sidwell, R.W. 2005. Interferon alfacon-1 protects hamsters

from lethal Pichinde virus infection. *Antimicrob Agents Chemother.* 49: 2378-2386. PMID: 15917537

52. Sidwell, R.W., Bailey, K.W., Wong, M-H., Barnard, D.L., and Smee, D.F., 2005. In vitro and in vivo influenza virus-inhibitory effects of viremide. *Antiviral Res.* 68:10-17. PMID: 16087250
53. Barnard, D.L. 2006. Current status of anti-picornavirus therapies. *Curr. Pharm. Design.* 12: 1379-1390. PMID: 16611122
54. Cho, J.H., **Barnard, D.L.**, Sidwell, R.W., Kern, E.R., Chu, C.K. 2006. Synthesis of cyclopentenyl carbocyclic nucleosides as potential antiviral agents against orthopoxviruses and SARS. *J. Med. Chem.* 49:1140-1148. PMID: 16451078
55. Sidwell, R.W., **Barnard, D.L.** 2006. Respiratory Syncytial Virus Infections: Recent Prospects for Control. *Antiviral Res.* 71:379-390. PMID: 16806515
56. Sidwell, R.W., Smee, D.F., **Barnard, D.L.** 2006. Development of antiviral drugs against avian (H5N1) influenza virus. In I. Wang (ed.), *Avian (H5N1) Influenza Virus as a Potential Global Pandemic Agent*. Transworld Research Network Publishers, India. pp63-83.
57. Barnard, D.L., Day, C.W., Bailey, K., Heiner, M., Montgomery, R., Lauridsen, L., Winslow, S., Hoopes, J., Li, J.K.-K., Lee, J., Carson, D.A., Cottam, H.B., and Sidwell, R.W. 2006. Enhancement of the infectivity of SARS-CoV in BALB/c mice by IMP dehydrogenase inhibitors, including ribavirin. *Antiviral Res.* 71:53-63. PMID: 16621037
58. Chu, C. K., Gadthula, S., Chen, X., Choo, H., Olgen, S., Sidwell, R. W. and **Barnard, D. L.** 2006. Antiviral activity of nucleoside analogs against SARS-Coronavirus. *Antiviral Chem. Chemother.* 17:285-289. PMID: 17176633
59. Barnard, D.L., Day, C.W., Bailey, K., Heiner, M., Montgomery, R., Lauridsen, L., Chan, P.K.-S. and Sidwell, R.W. 2006. Evaluation of immune modulators, interferons and known *in vitro* SARS-CoV inhibitors for inhibition of SARS-CoV replication in BALB/c mice. *Antiviral Chem. Chemother.* 17:275-84. PMID: 17176632
60. Sidwell, R.W., **Barnard, D.L.**, Day, C.W., Smee, D.F., Bailey, K.W., Wong, M.H., Morrey, J.D., Furuta, Y. 2007. Efficacy of Orally Administered T-705 on Lethal Avian Influenza A (H5N1) Virus Infections in Mice. *Antimicrob Agents Chemother.* 51:845-851. PMID: 17194832
61. Borkow, G., Sidwell, R.W., Smee, D.F., **Barnard, D.L.**, Morrey, J.D., Lara-Villegas, H.H., Shemer-Avni, Y., Gabbay, J. 2007. Neutralizing viruses in suspensions by copper oxide 1 based filters. *Antimicrob. Agents Chemother.* 51:2605-2607. PMID: 17470650

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63. Hu, M.C., Jones, T., Kenney, R.T., **Barnard, D.L.**, Burt, D.S., Lowell, G.H. 2007. Intranasal Protollin-formulated recombinant SARS S-protein elicits respiratory and serum neutralizing antibodies and protection in mice. *Vaccine.* 25:6334–6340. PMID: 17640780
64. Selvam, P., Vijayalakshimi, P., Smee, D.F., Gowen, B.B., Julander, J.G., Day, C.W., **Barnard, D.L.** 2007. Novel 3-sulphonamido-quinazolin-4(3H)-one derivatives: microwave-assisted synthesis and evaluation of antiviral activities against respiratory and biodefense viruses. *Antivir. Chem. Chemother.* 18:301-305. PMID: 18046963
65. Barnard, D.L., Day, C.W., Bailey, K., Heiner, M., Montgomery, R., Lauridsen, L., Jung, K-H., Chan, P.K.-S. , Li, J.K-K., Sidwell, R.W. 2008. Is the Anti-Psychotic, 10-(3-(Dimethylamino)propyl)phenothiazine (Promazine), a Dangerous Drug with Which to Treat SARS Infections? Efficacy of Promazine on SARS-CoV Replication in a Mouse Model. *Antiviral Res.* 79:105-13. PMID: 18423639
66. Smee, D.F., Humphreys, D.E., Hurst, B.L., **Barnard, D.L.** 2008. Antiviral activities and phosphorylation of 5-halo-2'-deoxyuridines and N-methanocarbathymidine in cells infected with vaccinia virus. *Antivir Chem Chemother.* 19:15-24. PMID: 18610554
67. Kumaki, Y., Day, C.W., Wandersee, M.K., Schow, B.P., Madsen, J.S., Grant, D., Roth, J.P., Smee, D.F., Blatt, L.M., and **Barnard, D.L.*** 2008. Interferon alfacon 1 inhibits SARS-CoV infection in human bronchial epithelial Calu-3 cells. *Biochem. Biophys. Res. Commun.* 371:110-113. PMID: 18406349
68. Subramanian, G.M., Moore, P.A., Gowen, B.B., Olsen, A.L., **Barnard, D.L.**, Paragas, J., Hogan, R.J. and Sidwell, R.W. 2008. Potent in vitro activity of the albumin fusion type 1 interferons (albumin-interferon-alpha and albumin-interferon-beta) against RNA viral agents of bioterrorism and the severe acute respiratory syndrome (SARS) virus. *Chemotherapy* 54: 176-180. PMID: 18560223
69. Roth, J. P., Li, J.K.; Smee, D.F., Morrey, J.D., **Barnard, D.L.*** 2009. A recombinant, infectious human parainfluenza virus type 3 expressing the enhanced green fluorescent protein for use in high-throughput antiviral assays. *Antiviral Res.* 82:12-21. PMID: 19189850
70. Barnard, D.L. 2009. Animal models for the study of influenza pathogenesis and therapy. *Antiviral Res.* 82: A110-A122. PMID: 19176218

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* Corresponding Author