

CURRICULUM VITAE

DAVID A. WATSON

30 October 2006

Education

1991; Ph.D., Molecular Microbiology, University of Houston, TX (*Honors Pass*)

1986; M.S., Marine Biology, University of Houston, TX

1981; B.S., Biology, Millikin University, Decatur, IL (*Magna Cum Laude*)

Professional Certification/Licensure N/A

Employment

Administrative:

- 2006-Present; Director, Houston Office of Research, Texas Woman's University (TWU), Institute of Health Sciences.
- 2005-2006; Associate Vice Chancellor for Sandia Operations (Sandia National Laboratories, Albuquerque, NM), Office of Research and Technology Transfer, The University of Texas System (Austin).
- 1997-2005; Program Manager for National Space Biomedical Research Institute (NSBRI) Peer Review Services, InDyne, Inc. (Houston, TX).
- 2004-2005; Director, Summer High School Student Research Program, University of Texas Medical Branch (UTMB), Galveston.
- 2004-2005; Member, Executive Science and Medicine Council, National Space Biomedical Research Institute.
- 1997-2001; Executive Secretary (elected) for the NSBRI Industry Forum.
- 1997; Director, Graduate Student Recruitment, Dept. of Microbiol./Immunol., UTMB.
- 1996-97; Director, Summer Undergraduate Research Program, UTMB.
- 1986-92; Chief Research Technician/Laboratory Manager, Infectious Disease Research Laboratories, Veterans Affairs Medical Center, Houston, TX (civil service rank GS-12).

Academic:

- 2006-Present; Research Professor, Dept. of Biology, and Associate Member, Graduate School, TWU.
- 2005-Present; Adjunct Professor, Dept. of Microbiology & Immunology, and Special Faculty Member, Graduate School of Biomedical Sciences, UTMB.
- 1998-2005; Adjunct Associate Professor, Dept. of Microbiology & Immunology, and Special Faculty Member, Graduate School of Biomedical Sciences, UTMB.
- 1997-98; Adjunct Asst. Professor, Dept. of Microbiology & Immunology, UTMB.
- 1995-97; Assistant Professor, Dept. of Microbiology & Immunology, UTMB.
- 1993-95; Assistant Professor, Dept. of Veterinary and Microbiological Sciences, North Dakota State University, Fargo, ND (NDSU).

- 1992-93; Postdoctoral Fellow, Eijkman-Winkler Institute for Microbiology, Academic Hospital Utrecht/Wilhelmina Children's Hospital, The Netherlands (J. Verhoef, M.D., Ph.D., Advisor).
- 1991-92; Postdoctoral Fellow, Dept. of Microbiology, Baylor College of Medicine, Houston, TX (D. Musher, M.D., Advisor).

Dissertation

“Transposon-mediated mutagenesis and cloning of a sequence required for encapsulation of *Streptococcus pneumoniae* serotype 3”, May 1991, J. Jacobson, Ph.D., Advisor; D. Musher, M.D. Co-Advisor

TEACHING

Courses Taught at TWU

Graduate:

Guest Lecture 10/12/06 “Grantsmanship: Government Sources, Foundations, and the Basics of Peer Review”, Advanced Problems Course, Dept. of Physical Therapy, TWU Institute for Health Sciences, Houston.

Doctoral Dissertations

Co-mentor for one completed and one ongoing doctoral dissertation:

- Carlos Orihuela, Ph.D., “Characterization of *Streptococcus pneumoniae* Gene Expression in a Novel Murine Peritoneal Cavity Model,” completed 2001 (Current position: Asst. Prof., Dept. of Microbiology, University of Texas Health Science Center);
- Chris Allen, “A Global Transcriptional Analysis of *Streptococcus pneumoniae* in Response to Low-Shear Modeled Microgravity,” projected completion 2007 (current graduate student, UTMB).

Master's Theses

Mentor for:

- Janice Zearley, “Characterization of the effect of streptomycin on the conjugative transposon Tn916,” completed 1995

Master's Professional Papers N/A

Other Scholarly Teaching, Mentoring and Curricular Achievements

Teaching and Mentoring:

- Taught undergraduate, graduate, and medical students in 18 different courses 1993-Present.
- Supervised 20 science fair projects at various levels, including: Deborah Musher, Grand Award Winner, Jr. Division (1989), Science and Engineering Fair of

- Houston (SEFH); and Saujan Sivaram, Reserve Grand Award Winner, 9th Grade Division (2000), SEFH
- Mentored projects by two high school students.
 - Supervised work by 10 undergraduate students in various capacities.
 - Supervised three graduate student research rotations.
 - Supervised six medical student research projects.
 - Lecture preceptor for one graduate student.
 - Science advisor for one NASA Research Initiation Grant.
 - Co-mentor for one post-doctoral fellow: Utpal Pandya, Ph.D. (Currently at UTMB)

Course Direction, Coordination and Curriculum Development:

- University of Texas Medical Branch (Galveston): (Dept. of Microbiology & Immunology)
 - 1995-98; *Microbiology & Immunology Graduate Student Seminar*-Course Director.
 - 1995-97; *Medical Microbiology Laboratory*-Course Co-Director.
- North Dakota State University (Fargo): (Dept. of Veterinary & Microbiological Sciences)
 - 1993-95; *Weekly Research Conference/Journal Club*, Coordinator.
 - 1994; *Weekly Seminar Series*, Coordinator.
- Minnesota State University-Moorhead: (Dept. of Biology) 1993-94; *Senior Biology Seminar*, External Advisor.
- Utrecht University (NL): (Eijkman-Winkler Institute for Microbiology) 1993; *Introduction to Molecular Biology*, Course Director.
- University of Houston (TX) Clear Lake: (Dept. of Biological Sciences) 1990; *Pathogenesis of Infectious Diseases*, Initiation of new course.

SCHOLARSHIP/CREATIVE ACHIEVEMENTS

Refereed Publications or Other Creative Achievements

1. Books:

b) Edited:

Constitutional Resistance to Infection, ed. by C. M. Verduin, H. van Dijk, **D. A. Watson**, and J. Verhoef, 1995. *Medical Intelligence Unit of R. G. Landes Company*, Georgetown, TX, a division of *Springer-Verlag*, Heidelberg, Germany.

2. Chapters:

1. Verduin, C.M., and **Watson, D.A.** 1995. A brief introduction to the study of constitutional resistance to infection. pp. xii-xvii in Constitutional Resistance to Infection, ed. by C. M. Verduin, H. van Dijk, **D. A. Watson**, and J. Verhoef, *Medical Intelligence Unit of R. G. Landes Company*, Georgetown, TX, a division of *Springer-Verlag*, Heidelberg, Germany.
2. **Watson, D. A.**, and Musher, D. M. 1995. Lectin-mediated interaction of microorganisms with host cells: Implications for innate immunity. pp. 3-14 in

Constitutional Resistance to Infection, ed. by C. M. Verduin, H. van Dijk, **D. A. Watson**, and J. Verhoef, *Medical Intelligence Unit of R. G. Landes Company*, Georgetown, TX, a division of *Springer-Verlag*, Heidelberg, Germany.

3. Articles:

1. **Watson, D. A.** and Loeblich, A. R., III. 1983. The application of electrophoresis to the systematics of the marine dinoflagellate genus *Heterocapsa*. *Biochem. System. Ecol.* 11:67-71.
2. Alam, M., Sanduja, R., **Watson, D. A.** and Loeblich, A. R., III. 1984. Sterol distribution in the genus *Heterocapsa*. (Pyrrhophyta). *J. Phycol.* 20(2):331-335.
3. Indelicato, S. R. and **Watson, D. A.** 1986. Identification of the photosynthetic pigments of the tropical benthic dinoflagellate *Gambierdiscus toxicus*. *Marine Fisheries Review.* 48(4):44-47.
4. Musher, D.M., **Watson, D. A.**, Lepow, M. L., McVerry, P., Hamill, R. J. and Baughn, R. E. 1987. Vaccination of 18-month-old children with conjugated polyribosyl-ribitol phosphate stimulates production of functional antibody to *Haemophilus influenzae* type b. *Pediatr. Infect. Dis.* 7:156-159.
5. **Watson, D. A.**, Musher, D. M. and Hamill, R. J. 1988. Interferon-gamma and polymorphonuclear leukocytes. *Ann. Intern. Med.* 109:250-251.
6. **Watson, D. A.** and Musher, D. M. 1988. A new method for concentrating viable alveolar macrophages from bronchoalveolar lavage specimens. *J. Immunol. Methods* 115:149-150.
7. Stevens, D. L., Musher, D. M., **Watson, D.A.**, Eddy, H., Hamill, R.J., Gyorkey, F., Rosen, H. and Mader, J. 1989. Spontaneous, nontraumatic gangrene due to *Clostridium septicum*. *Rev. Infect. Dis.* 12:286-296.
8. Musher, D.M., **Watson, D.A.**, Nickeson, D., Gyorkey, F., Lahart, C., and Rossen, R.D. 1990. The effect of HIV infection on phagocytosis and killing of *Staphylococcus aureus* by human pulmonary alveolar macrophages. *Amer. J. Med. Sci.* 299:158-163.
9. Musher, D.M., Luchi, M., **Watson, D.A.**, Hamilton, R. and Baughn, R.E. 1990. Pneumococcal polysaccharide vaccine in young adults and older bronchitics: determination of IgG responses by ELISA and the effect of adsorption of serum with nontype-specific cell wall polysaccharide. *J. Infect. Dis.* 161:728-735.
10. Musher, D.M., **Watson, D.A.**, and Baughn, R.E. 1990. Does naturally acquired IgG antibody to cell wall polysaccharide provide protection against pneumococcal infection? *J. Infect. Dis.* 161:736-740
11. Musher, D.M., **Watson, D.A.** and Dominguez, E.A. 1990. Pneumococcal vaccination: Work to date and future prospects. *Amer. J. Med. Sci.* 300:45-52.
12. **Watson, D.A.** and Musher, D.M. 1990. Interruption of capsule production in *Streptococcus pneumoniae* serotype 3 by insertion of transposon Tn916. *Infect. Immun.* 58:3135-3138.
13. Musher, D.M., Johnson, B., and **Watson, D.A.** 1990. Antibody to *Streptococcus pneumoniae* measured by ELISA or RIA but adsorbed by cell wall constituents does not protect mice against pneumococcal challenge. *Infect. Immun.* 58:3871-3876.
14. Rodriguez, M. C., Musher, D. M., Lahart, C., Lacke, C., Groover, J., **Watson, D. A.**, Baughn, R. E., Cate, T., Crofoot, G. 1992. Antibody to capsular

- polysaccharides of *Streptococcus pneumoniae* after vaccination of HIV-infected subjects with 23-valent pneumococcal vaccine. *J. Infect. Dis.* 165:553-556.
15. Hamill, R. J., Musher, D. M., Groover, J., Zavell, P., and **Watson, D. A.** 1992. IgG antibody reactive with five serotypes of *Streptococcus pneumoniae* in commercial intravenous immunoglobulin preparations. *J. Infect. Dis.* 166:38-42.
 16. Marshall, K., Musher, D. M., **Watson, D. A.**, and Mason, E. O. 1993. Penicillin susceptibility testing of *Streptococcus pneumoniae*. *J. Clin. Micro.* 31: 1246-1250.
 17. Musher, D., Groover, J., Rowland, J., **Watson, D.**, Struewing, J., Baughn, R., and Mufson, M. 1993. Antibody to capsular polysaccharides of *Streptococcus pneumoniae*: Prevalence, persistence, and response to revaccination. *Clin. Infect. Dis.* 17:66-73. **(Received the Louis Weinstein Prize for Best Clinical Article published in *Clinical Infectious Diseases*, 1993.)**
 18. **Watson, D. A.** 1993. Unusual mutation mechanisms and evolution. *Science.* 260:1958-1959.
 19. **Watson, D. A.**, and Musher, D. M. 1993. An analysis of sources of measurement variation in ELISA and a simple method for identification of outliers among replicate data. *Serodiagnosis and Immunotherapy in Infectious Disease*, 5:71-75.
 20. **Watson, D. A.**, Musher, D. M., and Hamill, R. J. 1993. Promotion of Tn916 excision via exposure to streptomycin. *J. Infect. Dis.* 168:1334-35.
 21. **Watson, D. A.**, Musher, D. M., Jacobsen, J. W., and Verhoef, J. 1993. A brief history of the pneumococcus in biomedical research: A panoply of scientific discovery. *Clin. Infect. Dis.* 17(5):913-24.
 22. **Watson, D. A.**, and Musher, D. M. 1993. Assessment of responses to pneumococcal infection and vaccination using enzyme-linked immunoassay. Guest editorial for *Serodiag. Immunother.*, 5(3):131-33.
 23. Rodriguez, M., Das, T., **Watson, D.**, and Musher, D. 1993. Relative contribution of cell wall and capsular polysaccharides in activating alternative and classical complement pathways by *Streptococcus pneumoniae*. *Med. Microbiol. Letters*, 2(8):427-35.
 24. Georghiou, P. R., Doggett, A. M., Kielhofner, M. A., Stout, J. E., **Watson, D. A.**, Lupski, J. R., and Hamill, R. J. 1994. Molecular fingerprinting of *Legionella* species by repetitive element PCR. *J. Clin. Micro.* 32(12):2989-2994.
 25. Georghiou, P. R., Hamill, R. J., Wright, C., Versalovic, J., Koeuth, T., **Watson, D. A.**, and Lupski, J. R. 1995. Molecular epidemiology of *Enterobacter aerogenes*: Identification of hospital outbreak strains using plasmid profiles and genomic fingerprinting with restriction endonuclease analysis and repetitive element polymerase chain reactions (rep-PCR). *Clin. Infect. Dis.* 20:84-94.
 26. **Watson, D. A.** and Musher, D. M. 1995. Molecular analyses of the genes encoding pneumococcal polysaccharide capsule production: Cloning Avery's transforming principle. *Reviews in Medical Microbiology* 5(4):217-223.
 27. **Watson, D. A.**, Musher, D. M., and Verhoef, J. 1995. Pneumococcal virulence factors and host immune responses to them. *European Journal of Clinical Microbiology and Infectious Diseases*, 14(6):479-490.

28. **Watson, D. A.**, Kapur, V., Musher, D. M., Jacobson, J. W., and Musser, J. M. 1995. Identification, cloning, and sequencing of DNA essential for encapsulation of *Streptococcus pneumoniae*. *Current Microbiology* 31:251-259.
29. **Watson, D. A.**, and Musher D. M. 1996. The pneumococcus: Sugar-coated killer. Published simultaneously in *Infections in Medicine* 13(5):373-376; 379-381; 429-432, and at: <http://www.medscape.com/Clinical/SCP/IIM/1996/v13.n05/m1684.watson/m1684.watson.html>
30. Musher, D., Groover, J., **Watson, D.**, Pandey, J., Rodriguez-Barradas, M., Pollack, M., Graviss, E. A., de Andrade, M., and Amos, C. I. 1997. The capacity to make immunoglobulin G to pneumococcal polysaccharides: evidence for codominant mixed inheritance in an Ashkenazic Jewish family. *J Invest Med.* 45:57-68.
31. Musher, D.M., Groover, J.E., Reichler, M.R., Riedo, F., Schwartz, B., **Watson, D.A.**, Baughn, R.E., Brieman, R. 1997. Emergence of antibody to capsular polysaccharides of *Streptococcus pneumoniae* during an outbreak of pneumonia and the association with nasopharyngeal colonization. *Clin Infect Dis.* 24:441-446.
32. **Watson, D. A.**, and Bogaert, D. 1997. What is behind antibiotic resistance? *Lab Med.* 28:324-327.
33. **Watson, D. A.**, and Bogaert, D. 1997. A battle of wills: bacterial resistance to antibiotics. *Lab Med.* 28:392-396
34. Ertugrul, N., Ryan, M.A., Rodriguez-Barradas, M., Agin, C.S., Murphy, S., Musher, D.M., and **Watson, D.A.** 1997. Molecular biological analysis of a nontypable *Streptococcus pneumoniae* implicated in an outbreak of conjunctivitis. *J Infect Dis.* 176:1401-1405.
35. Orihuela, C. J., and **Watson, D. A.** 1997. Poor man's dot blot apparatus. *BioTechniques* 23(6):1010.
36. Musher, D.M., Groover, J., **Watson, D.A.**, Rodriguez-Barradas, M.C., and Baughn, R.E. 1998. IgG responses to protein-conjugated pneumococcal capsular polysaccharides in persons who are genetically incapable of responding to unconjugated polysaccharides. *Clin Infect Dis.* 27:1487-90.
37. **Watson, D. A.** 1999. "It's time to stop counting beans", *Nature*, 398: 280.
38. **Watson, D.A.**, and Musher, D.M. 1999. A brief history of the pneumococcus in biomedical research. *Seminars in Respiratory Infections.* 14(3):198-208.
39. Barker, J.H., Musher, D.M., Silberman, R., Phan, H.M., and **Watson, D.A.** 1999. Genetic relatedness among pneumococci implicated in outbreak and sporadic conjunctivitis. *J. Clin. Micro.* 37(12):4039-4041.
40. Musher, D., Phan, H., **Watson, D.**, and Baughn, R., 2000. Antibody to capsular polysaccharide of *Streptococcus pneumoniae* at the time of hospital admission for pneumococcal pneumonia. *J. Infect. Dis.* 182: 158-167.
41. Orihuela, C. J., Jansen, R., Robb, C., **Watson, D. A.**, and Niesel, D.W. 2000. Peritoneal culture alters *Streptococcus pneumoniae* protein profiles and virulence properties. *Infect. Immun.* 68:6082-6086.

42. Musher, D.M., **Watson, D.A.**, and Baughn, R.E. 2000. Genetic control of the immunologic response to pneumococcal capsular polysaccharides. (**Invited paper from 2nd International Conference on Vaccines**) *Vaccine* 19(6): 623-627.
 43. **Watson, D.A.**, Davis, B.R., and Niesel, D.W. 2001. "Undergraduates must learn to communicate....," *Nature* 411:992.
 44. Orihuela, C.J., Mills, J., Robb, C.W., Wilson, C.J., **Watson, D.A.**, and Niesel, D.W. 2001. *Streptococcus pneumoniae* Pst production is phosphate-dependent and enhanced during growth in the murine peritoneal cavity. *Infect. Immun.* 69:7565-7571.
 45. Pandya, U., Allen, C.A., **Watson, D.A.**, and Niesel, D.W. 2005. Global Profiling of *Streptococcus pneumoniae* Transcripts at Different Growth Temperatures, *Gene*: 360(1):45-54.
4. Book reviews (include full publication data)
1. **Watson, D. A.** 1997. Web Site Review, "MEDSCAPE." *American Society for Microbiology News*, 63(2): 103.
 2. **Watson, D. A.** 1997. Web Site Review, "Medscape." Internet Medical Marketing, 3(4): 2, 5.
 3. **Watson, D. A.** 1997. Web Site Review, "The Microbe Files-Washington State University," *American Society for Microbiology News*, 63(6): 330.
 4. **Watson, D. A.** 1997. Web Site Review, "The Antibody Page." *American Society for Microbiology News*, 63(8): 444.
 5. **Watson, D. A.** 1998. Web Site Review, "The Medical Mycology Research Center," *American Society for Microbiology News*, 64(2): 111.
 6. **Watson, D. A.** 1999. Web Site Review, "MEDSCAPE: Two Years Later." *American Society for Microbiology News*, 65(9): 643-644.
 7. **Watson, D. A.** 2002. Book Review, "*Helicobacter pylori*: Molecular and Cellular Biology." *American Society for Microbiology News*, 68(4): 196-197.
 8. **Watson, D. A.** 2002. Website Review, "The Virtual Museum of Bacteria" *American Society for Microbiology News*, 68(5): 249-250. (12K web site hits directly attributable to review).
 9. **Watson, D. A.** 2002. Book Review, "Betrayal of Trust: The Collapse of Global Public Health," *American Society for Microbiology News*, 68(11): 576-577.
 10. **Watson, D. A.** 2002. Book Review, "Biology of Plagues: Evidence from Historical Populations," *American Society for Microbiology News*, 68(12): 627-628.
 11. **Watson, D. A.** 2003. Book Review, "Manual of Childhood Infections (Second Edition)," *American Society for Microbiology News*, 69(1):42-43.
 12. **Watson, D. A.** 2003. Book Review, "Signals, Switches, and Regulons: Patterns of Bacterial Gene Expression," *American Society for Microbiology News*, 69(8):409.
 13. **Watson, D. A.** 2003. Book Review, "Microbiology of Composting," *American Society for Microbiology News*, 69(10):527.
 14. **Watson, D. A.** 2004. Book Review, "Educated Guess: A School Board Member Reflects," *American School Board Journal*, 191(2):47-48.
 15. **Watson, D. A.** 2004. Book Review, "Antibiotics: Actions, Origins, Resistance," *American Society for Microbiology News*, 70(7):340.

16. **Watson, D. A.** 2004. Book Review, "The Resistance Phenomenon in Microbes and Infectious Disease Vectors: Implications for Human Health and Strategies for Containment," *American Society for Microbiology News*, 70(9):431-2.
17. **Watson, D. A.** 2005. Book Review, "Microbial Genomes," *American Society for Microbiology News*, 71(3):XX.

5. Other completed works:

N/A

6. Completed exhibitions, performances, productions, films, etc. (describe nature of accomplishment, location, dates, etc.)

N/A

7. Completed compositions, scripts, scores, commissions, etc. (Accepted or installed)

N/A

8. Other (Invited Presentations)

Scientific/Academic:

1. Spring 2007; R&D Seminar, Luminex Corporation, Austin, TX.
2. Spring 2007; Friday Seminar, Dept. of Biology, TWU-Denton.
3. October 2006; "Grantsmanship"; Graduate Advanced Problems, Dept. of Physical Therapy, TWU-Houston.
4. March 2006; University Partnerships Committee, Sandia National Labs, Albuquerque, NM.
5. February 2006; Faculty Convocation, University of Texas El Paso.
6. July 2004; Div. Biol. Sciences, University of Houston Clear Lake, Seminar Series.
7. July 2004; Keynote Lecturer, National Youth Leadership Forum on Medicine, UTMB.
8. March 2003; Div. Biol. Sciences, University of Houston Clear Lake, Seminar Series.
9. January 2003; Academic Administration, University of Houston Clear Lake.
10. November 2000; Dept. of Biology & Microbiology, South Dakota St. Univ., Brookings.
11. August 2000; Dept. of Radiation Oncology, Univ. Maryland School of Med., Baltimore.
12. June 2000; Dept. of Micro & Immunol, Indiana Univ. School of Medicine, Indianapolis.
13. March 2000; Div. of Biol. Sciences, Marshall Univ., Huntington, WV.
14. February 2000; Div. Biol. Sciences, Univ. Houston Clear Lake, Seminar Series.
15. August 1997; Fri. Seminar Series, The Institute for Genomic Research, Rockville, MD.
16. June 1997; Scientific Advisory Board, MedImmune Corporation, Gaithersburg, MD.
17. June 1997; Summer High School Research Program, UTMB, "What is a Microbe?"

18. December 1996; Division of Infectious Diseases, Department of Medicine, UTMB.
19. November 1996; Dept. of Clinical Microbiol., Dijkzigt Hospital, Rotterdam, NL.
20. November 1996; Elsevier Science Publishers, Amsterdam, NL.
21. November 1996; Eijkman-Winkler Institute, Academic Hospital Utrecht, NL
22. June 1996; Department of Pediatrics, UTMB, Weekly Seminar Series.
23. June 1996; 58th Educational Program & National Mtg., American Medical Technologists, Houston, TX, "Antibiotic resistance among the pneumococcus and the enterococci."
24. February 1996; Division of Biological Sciences, University of Houston Clear Lake, Undergraduate Seminar Series.
25. December 1995; Eijkman-Winkler Institute, Academic Hospital Utrecht, NL.
26. September 1995; Department of Microbiology & Immunology, UTMB, Weekly Seminar Series, Special Topic "The World-Wide Web: A Scientist's Perspective."
27. January 1995; *Streptococcus pneumoniae* Investigational Team (SPIT) Conference, Univ. of Minnesota School of Medicine & VAMC, Minneapolis.
28. October 1994; Department of Microbiology, UTMB, Galveston, TX.
29. July 1994; Eijkman-Winkler Institute, Academic Hospital Utrecht NL.
30. July 1994; Pediatric Week Holland, Symposium presentation, "Virulence factors of encapsulated bacteria: What the pneumococcus has taught us", Rotterdam, NL.
31. June 1994; Dept. of Infect. Dis./Bacteriol., Royal Postgraduate Medical School, London.
32. April 1994; SPIT Conference, Univ. of MN Sch. of Med. & VAMC, Minneapolis.
33. March 1994; Dept. of Microbiol., Univ. of ND Sch. of Med., Grand Forks.
34. March 1994; Exec. Board Annual Mtg, ND Branch, American Lung Assn., Bismarck.
35. February 1994; Bush Foundation Grant Faculty Seminar Series, NDSU, "A Comparison of Higher Education in the United States and The Netherlands."
36. February 1994; Dept. of Vet. & Microbiol. Sciences, NDSU, Monthly Seminar Series.
37. November 1993; Infectious Diseases Section, VAMC, Boise, ID.
38. October 1993; Dept. of Vet. & Microbiol. Sciences, NDSU, Monthly Seminar Series.
39. September 1993; Department of Microbiology, Creighton Univ. Med. Sch., Omaha, NE.
40. September 1993; Grand Rounds, Creighton University Medical School, Omaha, NE.
41. June 1993; Statens Seruminstitut, Polymorphen Society, Copenhagen, Denmark.
42. March 1993; Eijkman-Winkler Institute, Academic Hospital Utrecht, NL
43. March 1993; Dept. of Immunology, Research Colloquium Immunologie, Academic Hospital Utrecht, NL
44. February 1993; Grand Rounds, Sofia Children's Hospital, Rotterdam, NL.
45. January, 1993; Molecular Pathogenesis Working Group, National Institute for Public Health and Environmental Protection, Bilthoven, NL.
46. October 1992; Utrecht Institute for Infection and Immunity, Keynote Lecture for Master Class "Molecular Recognition in Infection and Immunity," NL.

47. September 1992; Eijkman-Winkler Institute, Refereeravond, Academic Hospital Utrecht, NL.
48. September 1992; Dept. of Bacteriology, Faculty of Veterinary Science, Weekly Seminar, Utrecht Univ., NL.
49. June 1992; Dept. of Vet. & Microbiol. Sciences, NDSU, Fargo, ND.
50. April 1992; Infect. Dis. Section, VAMC, "LANs, RAM, DOS, & other acronyms."
51. March 1992; Dept. of Micro. & Immunol., Monthly Seminar, Baylor Coll. of Medicine.
52. October 1991; Development of the Sciences Seminar Series, University of Houston Clear Lake, Houston, TX, "A historical perspective on the development of molecular biology."
53. September 1991; Infect. Dis. Section, VAMC, & Dept. of Micro., Univ. TN-Memphis.
54. July 1991; Lab. of Bacteriol. & Immunol., Weekly Seminar, Rockefeller Univ., NYC.
55. July 1991; Dept. of Microbiol., University of Oklahoma Medical School, Oklahoma City.
56. May 1991; Dept. of Paediatric Infectious Diseases, Radcliffe Hospital, Oxford Univ., UK.
57. April 1991; Dept. of Infectious Diseases, University Hospital, University of Leiden, NL.
58. April 1991; Dept. of Infectious Diseases, Academic Hospital, Utrecht University, NL.
59. April 1991; Dutch Society for Microbiology, Annual Meetings, Symposium Presentation, "Genetics of capsule production in pneumococci", Lunteren, The Netherlands.
60. October 1990; Development of the Sciences Seminar Series, University of Houston Clear Lake, TX, "A historical perspective on the development of molecular biology."
61. March 1990; Clinical Microbiology Laboratory Weekly Seminar, VAMC, Houston, TX.
62. September 1989; Streptococcal Genetics Group Seminar Series, Department of Microbiology, School of Medicine, University of Alabama at Birmingham.

Community and Public Service:

1. April 2006 (4/2/06); Invited Guest on Radio Program "Science Studio"; KTEP 88.5 FM, El Paso, TX.
2. January 2006 (1/8/06); Invited Guest on Radio Program "High Tech New Mexico"; KKOB 770 AM, Albuquerque, NM.
3. May 2005; National Honor Society Induction, Keynote Speaker, Pearland High School.
4. April 2005; Testimony before Texas House of Representatives Public Education Committee, on behalf of Texas Association of School Boards/Texas Association of School Administrators, opposing House Bills *HB1263*, *HB12*, and *HB3042*.

5. March 2005; Testimony before Texas House of Representatives Public Education Committee, on behalf of Texas Association of School Boards, opposing House Bill *HB1445*.
6. December 2004; Community Leaders Forum, "Education Finance Reform", First United Methodist Church, Pearland, TX.
7. August 2004; Dedication Ceremony, Berry Miller Junior High School, Pearland ISD.
8. May 2004; District Academic Honors Banquet Speaker, Pearland ISD.
9. May 2003; Presenter, National School Boards Association, Annual Meeting.
10. September 2003; Invited Presenter, Texas Association of School Boards, Annual Meeting.
11. January 2001; Speaker/Panelist, Committee on Career Development, UTMB, CV Writing & Interviewing Skills Workshop for Graduate Students and Post-doctoral Fellows.
12. July 1999; Awards Banquet Speaker, American Society for Microbiology's Microbial Discovery Workshop, Stephen F. Austin State University, Nacogdoches, TX.
13. February 1999; Pearland, TX, Rustic Oak Elem. (grade 3), Science Supplementation.
14. March 1998; Mattoon, IL, Washington Elementary (grades K-2), "To Walk on Mars!"
15. March 1998; Space Day '98, Neoga, IL Elementary (grades 3-6), "To Walk on Mars!"
16. July 1997; Summer HS Research Program, UTMB, "How to Become a Scientist."
17. May 1997; Committee on Career Development, UTMB, Panel Discussion-Alternative Careers.
18. November 1996; Organization-Students Interested in Research Careers, Univ. TX Austin.
19. November 1995; Clear Creek (TX) Independent School District-Magnet Program, Super Science Showcase, "Jurassic Park Revisited: Is Extinction Really Forever?"

Non-Refereed Publications or Other Creative Achievements

Feature Articles:

1. **Watson, D. A.** 1997. "Too Much Technology?" *Lab. Med.* 26(2): 96 (*Paper added to permanent collections, Natl. Ref. Ctr. for Bioethics Literature, Georgetown Univ.*)
2. **Watson, D. A.**, and Bogaert, D. 1997. "Antibiotic Resistance: What Is It and What Can Be Done?" *AMT (American Medical Technologist) Events (Feature Story)*, 14: 60-61.
3. **Watson, D. A.** 2001. "The International Space Station: An Introduction," January Issue, Baycomber (Cover Story), 3(1):10-13, 16.
4. **Watson, D. A.** 2001. "The International Space Station: An Introduction," reprinted with permission, in: Mattoon (IL) Journal-Gazette, 3/3/01, Section C, pp. 1, 3.
5. **Watson, D. A.** 2001. "Basic Research and the Future of NASA," August 2001, Baycomber (Feature Story), 3(8):12, 14, 16 and 18.

6. **Watson, D. A.** 2002. "Climbing the Learning Curve (Part 1 in a series)" *Texas Lone Star* (Texas Association of School Boards Magazine--**Cover Story**), 20(5):6-8.
7. **Watson, D. A.** 2003. "Higher Ground (Part 2 in a series)" *Texas Lone Star* (*Feature Story*), 21(2):13-14.
8. **Watson, D.A.** 2003. "How to Reach for the Stars (or At Least Stay Healthy While Trying)," reprinted with permission, in: The Neoga (IL) News (*Feature Story*), 3/13/01, p. 1.
9. **Watson, D. A.** 2003. "Climbing the Learning Curve: Rookie Schooled on Board Service" *The Illinois School Board Journal* (Illinois Association of School Boards Magazine--*Feature Story*), 71(2):4-6.
10. **Watson, D.A.** 2003. "Aviation Dreams," reprinted with permission, in: The Neoga (IL) News (*Feature Story*), 10/28/03, p. 1.
11. **Watson, D.A.** 2003. "Climbing the Learning Curve," reprinted in: *From the Board Room* (Vermont School Boards Association Newsletter--*Feature Story*), April 2003, pp. 10, 12.
12. **Watson, D. A.** 2004. "Seeing the Forest—and the Trees (Part 3 in a series)" *Texas Lone Star* (**Cover Story**), 22(8):6-9.
13. **Watson, D. A.** 2005. "Fast Growth + High Expectations = Big Challenge" (Part 4 in a series)" *Texas Lone Star* (**Cover Story**), 23(9):6-9.

Guest Editorial/Opinion Columns:

1. **Watson, D. A.** 1987. (Aug. 30) "Smoking hazard no smokescreen", The Houston Post.
2. **Watson, D. A.** 1988. (Feb. 12) "Unfortunately, high-tech isn't always best-tech," The Houston Post.
3. **Watson, D. A.** 1997. "Yes Virginia, There is a Scientist," The Neoga News, 11/10/97.
4. **Watson, D. A.** 1997. "Virginia Parrett was a Mentor Who Mattered," Mattoon (IL) Journal-Gazette, 11/16/97, section A, pg. 2.
5. **Watson, D. A.** 2001. "Who Are You Calling Gifted?," reprinted with permission in: GAP (Gifted Advocacy for Pearland) Newsletter, 1(1):1-2.
6. **Watson, D. A.** 2001. "A Baycomber Editorial Opinion," Baycomber 3(3):4.
7. **Watson, D. A.** 2004. "Watson to Seek Second Term on PISD Board," The Pearland Reporter News, 34(6): pp. A & B.
8. **Watson, D. A.** 2004. "Another Way to Measure PISD's Overall Success," The Pearland Journal, 34(26): p. 6A.
9. **Watson, D. A.** 2004. "On Surveys and TAKS Testing," The Pearland Reporter News, 34(43): p. 3.
10. **Watson, D. A.,** and Gant, V.F. 2005. "A Question of Trust," The Pearland Journal, 34(49): p. 4A.
11. **Watson, D. A.** 2005. "Weekend Reading Was Well Spent," The Pearland Journal, 34(52): p. 5A.
12. **Watson, D. A.** 2005. "Some of the 'Best and Brightest'," The Pearland Reporter News, 35(18): p. 3.
13. **Watson, D. A.** 2005. "Christensen Helps Keep PISD Buses Rolling Safely," The Pearland Journal, 35(3): p. 3A.

14. **Watson, D. A.** 2005. "Thank You Mr. Christensen," The Pearland Reporter News, 35(20): p. 3.
15. **Watson, D. A.** 2005. "Just a Numbers Game," The Pearland Reporter News, 35(35): p. 3.
16. **Watson, D. A.** 2005. "Necessary School Spending Covers More Than Just What Goes On In the Classroom," The Pearland Journal, 35(13): p. 5A.
17. **Watson, D. A.** 2005. "Educating Blueberries," The Pearland Reporter News, 35(33): p. 3.
18. **Watson, D. A.** 2005. "Involvement in Scouting Still Makes Difference," The Pearland Journal, 35(19): p. 4A.
19. **Watson, D. A.** 2005. "Why Scouting Still Matters," The Pearland Reporter News, 35(36): p. 3.
20. **Watson, D. A.** 2005. "Scouting Still Matters," The Galveston Daily News, September 9, 2005.
21. **Watson, D. A.** 2005. "Scouting Still Matters," The Facts (Brazoria County, Texas), September 17, 2005.
22. **Watson, D. A.** 2006. "The Flu Question: Fear Complacency," The Galveston Daily News, 164(11): p. B8.
23. **Watson, D. A.** 2006. "A Letter to the Community," The Pearland Reporter News, 36(35): p. 8.
24. **Watson, D. A.** 2006. "Good Reasons to Vote Yes for School Bonds," The Pearland Journal, 35(24): p. 5A.
25. **Watson, D. A.** 2006. "PISD high school plan is the best approach," The Pearland Journal, 35(27): p. 4A.

Letters to the Editor:

1. **Watson, D. A.** 1988. (Sept. 7) "Why Volunteer?," The Friendswood (TX) Reporter.
2. **Watson, D. A.** 1990 (Dec. 5) "Flu shot solution," The Houston (TX) Post.
3. **Watson, D. A.** 1992, "Direct mail piling up in the lab", *American Society for Microbiology News*, 58(4):174.
4. **Watson, D. A.** 1993. "Teaching & Research Med School Faculties", *American Society for Microbiology News*, 59(5): 218.
5. **Watson, D. A.** 1995. "Proceeding to rudeness is not the neighborly way", 1/21/95, The Forum (Fargo, ND).
6. **Watson, D. A.** and Niesel, D. W. 1997. "Summer Research," The Scientist, 11(21): 10.
7. **Watson, D. A.** 1998. "Citation Impact Factors," The Scientist, 12(24): 13.
8. **Watson, D. A.**, and Hamill, R. J. 1998. "Comment on bacteriophage as adjunct therapeutic agents." *Genetic Engineering News*, 18(21): 16.
9. **Watson, D. A.** 1998. "Fischer a fine candidate for president of NDSU," November 10, 1998, The Forum (Fargo, ND).
10. **Watson, D. A.** 2000. "Scouts Work Together with PISD." November 1, 2000, The Pearland (TX) Journal
11. **Watson, D. A.** 2001. "An Open Letter to the Citizens of Pearland" April 4, 2001, The Pearland Journal.

12. **Watson, D. A.** 2001. "Thank You Pearland!" May 16, 2001, The Pearland Journal.
13. **Watson, D. A.** 2001. "Education Finance Reform" October 6, 2001, The Facts (Brazoria County, TX daily newspaper).
14. **Watson, D. A.** 2001. "On the Value of Human Space Exploration" *Genetic Engineering News*, 21(20):6, 75.
15. **Watson, D. A.** 2002. "A Celebration of Diversity" March 6, 2002, The Pearland Journal.
16. **Watson, D. A.** 2002. "A Celebration of Diversity" March 6, 2002, The Pearland Reporter News.
17. **Watson, D. A.** 2003. "Comments on the Review of a Book Entitled: Bacterial Pathogenesis: A Molecular Approach" *Clinical Infectious Diseases*, 36:127.
18. **Watson, D. A.** 2004. "PISD Board Member Sets It Straight", The Pearland Journal, 33(33): pp. 3A & 7A.
19. **Watson, D. A.** 2004. "Measuring PISD", The Pearland Journal, 34(10):9.
20. **Watson, D. A.** 2004. "Measuring PISD", The Pearland Reporter News, 34(27):3.
21. **Watson, D. A.** 2004. "All are 'Main Event'", The Houston Chronicle, 104(20):B10.
22. **Watson, D. A.** 2005. "Just Say 'No' to Vouchers", The Pearland Reporter News, 35(10):3.
23. **Watson, D. A.**, and Gant, V.F. 2005. "A Question of Trust," The Pearland Reporter News, 35(14): p. 3.
24. **Watson, D.A.**, 2005. "The Kids Win Again," The Pearland Reporter News, 35(37): p. 3.
25. **Watson, D. A.** 2005. "The Kids Win Again," The Pearland Journal, 35(20): p. 4A.
26. **Watson, D. A.** 2006. "Support Voiced for Bond Package," The Houston Chronicle, "This Week for Pearland/Friendswood," 106(06): p. Z7-2.
27. **Watson, D. A.** 2006. "PISD Bond Package Should Be Supported," The Houston Chronicle, "This Week for Pearland/Friendswood," 106(20): p. Z7-2.
28. **Watson, D.A.**, 2006. "Bond Package Provides Solid Infrastructure," The Pearland Reporter News, 36(43): p. 3.

Presentations at Professional Meetings

1. **Watson, D. A.**, McCommas, S. A., Loeblich, A. R., III, and LeBoeuf, R. D. 1981. Biochemical techniques for species determination in the dinoflagellate (Pyrrhophyta) genus *Heterocapsa*. *Amer. Zool.* 21:1006.
2. **Watson, D. A.** and Loeblich, A. R., III. 1984. Sterol distribution in the genus *Heterocapsa*. (Pyrrhophyta). *J. Phycol.* 20:71s.
3. **Watson, D. A.** and Loeblich, A. R., III. 1984. Genetic recombination in the marine dinoflagellate (Pyrrhophyta) *Heterocapsa pygmaea* as revealed by the use of electrophoresis. *J. Phycol.* 20:100s.
4. Indelicato, S. R. and **Watson, D. A.** 1986. Chloroplast pigments of the ciguateric dinoflagellate, *Gambierdiscus toxicus*. *J. Protozool.* Suppl.
5. Indelicato, S. R., **Watson, D. A.**, Makkinje, A. and Loeblich, A. R., III. 1986. A comparative analysis of two *Coolia* spp. strains. *J. Phycol.* Suppl. p. 58.

6. Hamill, R., Brown, D., **Watson, D.**, Musher, D. and Baughn, R. 1987. The observed bactericidal effect of lactoferrin is an artifact of pH. *Program and Abstracts of the 27th Interscience Conference on Antimicrobial Agents and Chemotherapy*. p. 194, abst. #560.
7. Musher, D. M., **Watson, D. A.**, Baughn, R. E. and Hamill, R. J. 1987. The lack of effect of human lymphokines on the function of polymorphonuclear neutrophils. *Clin. Res.* 35:616A.
8. Luchi, M., Hamilton, R., Musher, D., **Watson, D.** and Baughn, R. 1988. Immunoglobulin G class and subclass response to pneumococcal polysaccharide vaccine. *Program and Abstracts of the 28th Interscience Conference on Antimicrobial Agents and Chemotherapy*. p. 294, abstract no. 1037.
9. Musher, D. M., **Watson, D. A.**, Nickeson, D., Gyorkey, F., LaHart, C. and Rossen, R. D. 1989. HIV infection modifies function of human pulmonary macrophages. Annual Meetings of the Southern Society for Clinical Investigation. *Clin. Res.* vol. 37.
10. **Watson, D. A.**, Musher, D. M., McShan, W. M. and Yother, J. L. 1989. A method for efficient transfer of transposon Tn916 from *Enterococcus faecalis* to recipient encapsulated *Streptococcus pneumoniae*. *33rd Annual Wind River Conference on Genetic Exchange*.
11. **Watson, D. A.** and Musher, D. M. 1989. Production of an unencapsulated *Streptococcus pneumoniae* mutant by insertion of transposon Tn916. *Program and Abstracts of the 29th Interscience Conference on Antimicrobial Agents and Chemotherapy*. p. 253, abstract no. 903.
12. Das, T., **Watson, D. A.** and Musher, D. M. 1990. Comparative role of cell wall components and capsular polysaccharide in activation of complement by *Streptococcus pneumoniae* serotype 3. Annual Meetings of the Southern Society for Clinical Investigation. *Clin. Res.* vol. 38.
13. Dominguez, E. A., Musher, D. M., **Watson, D. A.**, and Greenberg, S. 1990. Antibody response to pneumococcal type 12F infection in a jail epidemic, as measured by an enzyme-linked immunoassay. *Baylor College of Medicine, Spring Resident's and Fellows Symposium*.
14. **Watson, D. A.** and Musher, D. M. 1990. Attenuation of virulence due to transposon interruption of a putative encapsulation gene in *Streptococcus pneumoniae* serotype 3. *Program and Abstracts of the 90th Annual Meeting of the American Society for Microbiology*. p. 99, abstract no. D112.
15. **Watson, D. A.** and Musher, D. M. 1990. Cloning and initial characterization of a putative gene involved in capsule production in *Streptococcus pneumoniae* serotype 3. *Program and abstracts of the Third International Conference on Streptococcal Genetics*, p. 22, abstract no. A39.
16. Musher, D. M. and **Watson, D. A.** 1990. A strategy for targeting and cloning encapsulation genes from *Streptococcus pneumoniae*. Workshop on the genetics of bacterial capsular polysaccharide expression, Oxford University, UK (proceedings unpublished).
17. Das, T., **Watson, D. A.** and Musher, D. M. 1990. Role of cell wall polysaccharide and capsular polysaccharide of *Streptococcus pneumoniae* type 3 in activating complement by classical and alternative pathways. *Program and*

- abstracts of the *30th Interscience Conference on Antimicrobial Agents and Chemotherapy*, p. 141, abstract no. 325.
18. Hamill, R. J., Johnson, B., Zavell, P., **Watson, D. A.** and Musher, D. M. 1990. IgG antibody reactive with five *Streptococcus pneumoniae* serotypes in commercial immune globulin preparations. *Program and abstracts of the 30th Interscience Conference on Antimicrobial Agents and Chemotherapy*, p. 166, abstract no. 478.
 19. Rodriguez, M., Musher, D., Lahart, C., Groover, J., **Watson, D.**, Baughn, R. and Lacke, C. 1991. Poor response of HIV-infected men to pneumococcal vaccine. Annual Meetings of the Southern Society for Clinical Investigation, *Clin. Res.* vol. 39.
 20. **Watson, D. A.**, Musher, D. M., and Jacobson, J. W. 1991. Initial characterization of a cloned sequence required for encapsulation of *Streptococcus pneumoniae* serotype 3. *Program and abstracts of the 91st Annual Meetings of the American Society for Microbiology*, p. 53, abstract no. B165.
 21. **Watson, D. A.**, Musher, D. M., and Jacobson, J. W. 1991. Genetics of capsule production in pneumococci. Part of a symposium entitled "Genetics and Immunology of Bacterial Capsular Polysaccharides", *Dutch Society for Microbiology Annual Meetings*.
 22. Musher, D., Reichler, M., Groover, J., Schwartz, B., Struewing, J., and **Watson, D.** 1991. Relation between levels of antibody to *Streptococcus pneumoniae* type 1 and susceptibility to pneumonia, and emergence of antibody in the absence of infection. *Program and Abstracts of the 31st Interscience Conference on Antimicrobial Agents and Chemotherapy*, p. 150, abstract no. 308.
 23. Rodriguez, M., Musher, D., Lahart, C., Lacke, C., Groover, J., **Watson, D.**, Baughn, R., Cate, T., Crofoot, G. 1991. IgG responses of HIV-infected men to 23-valent pneumococcal vaccine. *Program and Abstracts of the 31st Interscience Conference on Antimicrobial Agents and Chemotherapy*, p. 204, abstract no. 630.
 24. **Watson, D.**, Musher, D., and Groover, J. 1991. A method for identification of outliers among triplicate ELISA determinations during automated data acquisition. *Program and Abstracts of the Annual Meetings of the Texas Branch of the American Society for Microbiology*.
 25. Rowland, J., Musher, D., Mufson, M., Groover, J., and **Watson, D.** 1992. Antibody response and persistence after vaccination of older men with 23-valent pneumococcal vaccine. Annual Meetings of the Southern Society for Clinical Investigation, *Clin. Res.* vol. 40.
 26. **Watson, D.A.**, and Musher, D.M. 1992. Characterization of resistance to optochin among isolates of *Streptococcus pneumoniae*. *Abstracts of the 92nd General Meeting of the American Society for Microbiology*, p. 423, abstract no. C-19.
 27. **Watson, D.A.**, Musher, D.M., and Hamill, R.J. 1992. Stimulation of excision of transposon Tn916 from *Streptococcus pneumoniae* serotype 3. *Abstracts of the 92nd General Meeting of the American Society for Microbiology*, p. 183, abstract no. H-4.
 28. Bandres, J.C., Trial, J., **Watson, D.A.**, Musher, D.M., and Rossen, R.D. 1992. Enhanced oxidative radical release and killing of pneumococci by peripheral

- blood neutrophils of vaccinated subjects. *Annual Meetings of the Federation of American Societies for Experimental Biology. FASEB Journal* 6(4): A1044 Part 1.
29. Georghiou, P. R., Wright, C., Versalovic, J., Koeuth, T., **Watson, D. A.**, Hamill, R. J., and Lupski, J. R. 1992. Epidemiologic typing of *Enterobacter aerogenes* using repetitive-element polymerase chain reactions (rep-PCR) for genomic fingerprinting. *International Conference on Infectious Diseases, Nairobi, Kenya*.
 30. Georghiou, P. R., Wright, C., Versalovic, J., Koeuth, T., **Watson, D. A.**, Hamill, R. J., and Lupski, J. R. 1992. Molecular epidemiology of *Enterobacter aerogenes* using plasmid profiles, restriction enzyme analysis, and repetitive-element polymerase chain reactions (rep-PCR). *Program and Abstracts of the 32nd Interscience Conference on Antimicrobial Agents and Chemotherapy*, p. 346, abstract no. 1415.
 31. Rodriguez, M., Musher, D., Groover, J., **Watson, D.**, Lacke, C, and Lahart, C. 1992. Antibody response of HIV-infected subjects to revaccination with an increased dose of 23-valent pneumococcal vaccine. *Program and Abstracts of the 32nd Interscience Conference on Antimicrobial Agents and Chemotherapy*, p. 255, abstract no. 867.
 32. Bandres, J.C., Trial, J., Rodriguez, M., **Watson, D.A.**, Musher, D.M., and Rossen, R.D. 1992. Complement-mediated killing of pneumococci by peripheral blood neutrophils of immune and nonimmune subjects. *Program and Abstracts of the 32nd Interscience Conference on Antimicrobial Agents and Chemotherapy*, p. 136, abstract no. 151.
 33. Neeleman, C., Geelen, S., Aerts, P. Scheffer, L., **Watson, D.**, Verhoef, J., Fleer, A., and van Dijk, H. 1992. Protease-gevoelige virulentiefactoren van *Streptococcus pneumoniae*. Dutch Society for Immunology Annual Meetings, *Nederlandse Tijdschriften voor Geneeskunde* 137:687.
 34. Valenzuela, J.R., Matoba, A.Y., **Watson, D.A.**, Font, R.L. 1993. Loss of capsule due to transposon Tn916 mutagenesis in *Streptococcus pneumoniae* is associated with loss of crystalline characteristics in corneal infiltrates. Annual Meetings of the Association for Research in Vision and Ophthalmology, *Investigative Ophthalmology & Visual Science* 34(4):850.
 35. **Watson, D. A.**, Musher, D. M., Kapur, V., Musser, J., and Verhoef, J. 1993. Analysis of capsulation sequences in *Streptococcus pneumoniae* serotype 3. *Abstracts and Program of the Sixth European Congress for Clinical Microbiology and Infectious Diseases*, abstr. no. 629, p. 175.
 36. Neeleman, C., Aerts, P., Geelen, S., **Watson, D.**, Verhoef, J., Fleer, A., and van Dijk, H. 1993. Virulence of *Streptococcus pneumoniae* is associated with a protease-sensitive surface component. *Abstracts and Program of the Sixth European Congress for Clinical Microbiology and Infectious Diseases*, abstr. no. 630.
 37. **Watson, D.**, Musher, D., Kapur, V., Shafer, J., Musser, J., Fleer, A., Verhoef, J., and van Dijk, H. 1993. A sequence required for encapsulation of *Streptococcus pneumoniae* serotype 3 contains BOX repeat elements. *Program and abstracts of the 93rd General Meeting of the American Society for Microbiology*, p. 58, abstract no. B180.

38. Nuijten, P., **Watson, D.**, and van der Zeist, B. 1993. Initial characterization of the capsule synthesis locus of *Streptococcus pneumoniae* serotype 14. *Program and abstracts of the 93rd General Meeting of the American Society for Microbiology*, p. 58, abstract no. B181.
39. Marshall, K., Musher, D. M., **Watson, D. A.**, and Mason, E. O. 1993. Penicillin susceptibility testing of *Streptococcus pneumoniae*. Annual meetings of the Southern Society for Clinical Investigation. *Clin. Invest.* vol. 41.
40. **Watson, D. A.**, Nuijten, P. J., Musher, D. M., and van der Zeist, B. 1993. Molecular genetic analysis of capsulation of the pneumococcus. *Permanent book of abstracts, Polymorphen Scientific Society of the Statens Seruminstitut*, Copenhagen, Denmark.
41. Neeleman, C., Aerts, P., Scheffer, L., **Watson, D.**, Verhoef, J., Fler, A., and van Dijk, H. 1993. Virulence of *Streptococcus pneumoniae* is associated with a protease-sensitive surface component. *Eijkman-Winkler Laboratory for Medical Microbiology Koepel Conference*, abstracts unpublished.
42. **Watson, D.**, Neeleman, C. Aerts, P., Nuijten, P., Verhoef, J., Fler, A., van Dijk, H., Musher, D., Kapur, V., and Musser, J. 1993. Molecular cloning and analysis of Avery's transforming principle. *Eijkman-Winkler Laboratory for Medical Microbiology Koepel Conference*, abstracts unpublished.
43. Musher, D. M., **Watson, D. A.**, Musser, J., Elliott, J., and Facklam, R. 1993. Virulence of *Streptococcus pneumoniae* for mice is serotype-dependent: Saturable receptors for capsular polysaccharides of certain serotypes may account for natural host resistance. *Program and Abstracts of the 33rd Interscience Conference on Antimicrobial Agents and Chemotherapy*, p. 331, abstract no. 1156.
44. Neeleman, C., Geelen, S., Aerts, P., Van Tilburg, M., **Watson, D.**, Verhoef, J., Fler, A., and van Dijk, H. 1993. Virulence of *Streptococcus pneumoniae* is associated with a protease-sensitive surface component that binds complement regulator factor H. *Program and Abstracts of the 33rd Interscience Conference on Antimicrobial Agents and Chemotherapy*, p. 219, abstract no. 548.
45. **Watson, D.**, Musher, D., Kapur, V., Shafer, J., Musser, J., Fler, A., Verhoef, J., and van Dijk, H. 1993. A sequence required for encapsulation of *Streptococcus pneumoniae* serotype 3 contains BOX repeat elements. *Nederlandse Tijdschriften voor Geneeskunde*, 1993, suppl. no. 1, p. S8, abstract no. F.2.
46. Neeleman, C., Aerts, P., Scheffer, L., **Watson, D.**, Verhoef, J., Fler, A., and van Dijk, H. 1993. Virulence of *Streptococcus pneumoniae* is associated with a protease-sensitive surface component. *Nederlandse Tijdschriften voor Geneeskunde*, 1993, suppl. no. 1, p. S9, abstract no. F.6.
47. **Watson, D.A.**, and D.M. Musher. 1994. Virulence factors of encapsulated bacteria: What the pneumococcus has taught us. Joint Annual Meetings of the North Dakota (86th) and Minnesota (62nd) Academies of Science, *Proc. North Dakota Acad. Sci.*, 1994, 48:64.
48. **Watson, D.A.**, Zearley, J.J., Kahan, M.M., D.M. Musher, and Hamill, R.J. 1994. Characterization of the effect of streptomycin on the conjugative transposon Tn916. *Proceedings and Abstracts of the Fourth International American Society for Microbiology Conference on Streptococcal Genetics*, p. 10, abstr. no. M48.

49. Musher, D., Groover, J., Rodriguez-Barradas, M., and **Watson, D.** 1994. Antibody response to pneumococcal vaccination in an extended family and relation to Km and Gm allotypes. *Infectious Diseases Society of America Annual Meetings*.
50. Groover, J., Musher, D., **Watson, D.**, and R. Feldman. 1994. Avidity of IgG to pneumococcal polysaccharides in vitro and after pneumococcal vaccine: Relation to age and health of subjects, and in vivo correlates in mice. *Infectious Diseases Society of America Annual Meetings*.
51. Georghiou, P. R., **Watson, D. A.**, Doggett, A. M., Kielhofner, M. A., Lupski, J. R., Stout, J. E., and Hamill, R. J. 1994. Molecular typing of *Legionella* species using repetitive element polymerase chain reaction (rep-PCR). *34th Interscience Conference on Antimicrobial Agents and Chemotherapy*.
52. **Watson, D.A.**, and D.M. Musher. 1994. Virulence factors of encapsulated bacteria: What the pneumococcus has taught us. *Proceedings and Abstracts of the 1994 Pediatric Week Holland Congress*, abstr. no. L18.
53. Tharappel, R.A., Musher, D.M., **Watson, D.A.**, Baughn, R.E., Rossen, R.D., and Birdsall, H.G. 1995. Effect of secretory IgA on adherence of *Streptococcus pneumoniae* to HEp-2 cells in vitro. *Program and Abstracts of the 35th Interscience Conference on Antimicrobial Agents and Chemotherapy*, abstract no. G45.
54. **Watson, D.**, D. Musher, J. Groover, M. Rodriguez-Barradas, and R. Hamill. 1995. Immunity to *Streptococcus pneumoniae*. *Texas Regional Immunology Conference*, abstract no. 34.
55. **Watson, D.**, M. Tidwell, and D. Niesel. 1996. The Effect of Encapsulation of *Streptococcus pneumoniae* on invasion of cultured lung epithelium. *96th General Meeting of the American Society for Microbiology*, abstr. No. B-264, p. 200.
56. Melch, M., **D. Watson**, R. Hamill, and M. Rodriguez-Barradas. 1996. Polymerase Chain Reaction (PCR) Fingerprinting of Outbreak Isolates of *Streptococcus pneumoniae*. *96th General Meeting of the American Society for Microbiology*, abstr. No. C-270, p. 48.
57. Melch, M., **D. Watson**, R. Hamill, and M. Rodriguez-Barradas. 1996. Polymerase Chain Reaction (PCR) Fingerprinting of Outbreak Isolates of *Streptococcus pneumoniae*. *McLaughlin Fellowship Fund Annual Research Colloquium on Infection and Immunity*, book of abstracts, p. 22, no. 13.
58. Ertugral N., M. Rodriguez-Barradas, E. Houston, J. Groover, **D. Watson**, R. Hamill, and D. Musher. 1996. Genetic relatedness within and between serotypes of *Streptococcus pneumoniae* from the USA. *36th Interscience Conference on Antimicrobial Agents and Chemotherapy of the American Society for Microbiology*.
59. **Watson, D.**, Tidwell, M., Stek, C., Bogaert, D., and Niesel, D. 1997. Evaluation of the role of protein tyrosine kinases in invasion of cultured respiratory epithelium by *Streptococcus pneumoniae*. *Abstracts of the 97th General Meeting of the American Society for Microbiology*, p. 107.
60. Pong, A, Chartrand, S.A., Goering, R.A., and **Watson, D.A.** 1997. Nasopharyngeal colonization of adults and children with penicillin-resistant

- Streptococcus pneumoniae* in a child care center. *Second International Pediatric Infectious Disease Conference*.
61. Orihuela, C., **Watson, D.**, Robb, C., and Niesel, D. 1998. Use of differential display PCR to identify *in vivo* expressed products from *Streptococcus pneumoniae*. Abstracts of the 98th General Meeting of the American Society for Microbiology, p. 58.
 62. Orihuela, C., **Watson, D.**, Robb, C., and Niesel, D. 1998. Identification of *in vivo* expressed products from *Streptococcus pneumoniae* using differential display analyses. *McLaughlin Fellowship Fund Annual Research Colloquium on Infection and Immunity*.
 63. Musher, D., Groover, J., **Watson, D.**, Rodriguez-Barradas, M., Baughn, R. 1998. IgG responses to protein-conjugated pneumococcal capsular polysaccharides in persons who are genetically incapable of responding to unconjugated polysaccharides. *36th Annual Meeting of the Infectious Disease Society of America*, abstr. No. 77.
 64. Musher, D., Phan, H., Swift, A., **Watson, D.**, Baughn, R., Briles, D. 1998. Does antibody to Pneumolysin or PspA Protect Against Invasive Pneumococcal Disease? *36th Annual Meeting of the Infectious Disease Society of America*, abstr. No. 184.
 65. Orihuela, C., Janssen, R., Robb, C., **Watson, D.**, and Niesel, D. 1999. Characterization of *Streptococcus pneumoniae in vivo* using a novel murine peritoneal cavity model. Presented at the *McLaughlin Fellowship Fund Annual Research Colloquium on Infection and Immunity*. (**Winner of the prize for best graduate student poster**)
 66. Orihuela, C., Janssen, R., Robb, C., **Watson, D.**, and Niesel, D. 1999. *Streptococcus pneumoniae* response to growth in a murine peritoneal cavity model. Presented at the Annual Meeting of the *Southwest Section of Society for Experimental Biology & Medicine*, Galveston, TX.
 67. Orihuela, C., Janssen, R., Robb, C., **Watson, D.**, and Niesel, D. 1999. Characterization of *Streptococcus pneumoniae in vivo* using a novel murine peritoneal cavity model. Abstracts of the 99th General Meeting of the American Society for Microbiology, p. 51.
 68. Phan, H., Musher, D., Baughn, R., **Watson, D.**, and Griffin, J. 1999. IgG to capsular polysaccharide of *Streptococcus pneumoniae* may be present on admission for pneumococcal disease but is poorly functional in vitro and in vivo. *38th Interscience Conference on Antimicrobial Agents and Chemotherapy of the American Society for Microbiology*.
 69. Orihuela, C.J., **Watson, D.A.**, and Niesel, D. W. 1999. Characterization of pneumococcal gene expression in vivo using a murine model. Accepted for presentation at Discussion Meeting of The Royal Society entitled "The Activities of Bacterial Pathogens In Vivo," London, UK, October 1999.
 70. Orihuela, C.J., Mills, J.H., Wilson, C.J., **Watson, D.A.**, and Niesel, D.W. 2001. Expression of, *Streptococcus pneumoniae* pstS is responsive to growth *in vivo* and inorganic phosphate concentration. Presented at the 101st General Meeting of the American Society for Microbiology, abstr. No. H-41, p. 401.

71. Orihuela, C.J., Wilson, C.J., **Watson, D.A.**, and Niesel, D.W. 2001. Characterization of *Streptococcus pneumoniae* gene expression *in vivo*. Presented at Faculty Retreat, Dept. of Micro/Immunol., UTMB.
72. Orihuela, C.J., Knecht, J.G., **Watson, D.A.**, and Niesel, D.W. 2001. *Streptococcus pneumoniae* alters protein profiles and virulence potential in modeled microgravity. Abstracts of the 17th Annual Meeting of the American Society for Gravitational and Space Biology, *Gravitational and Space Biology Bulletin*, 15(1):64 (Abstr. No. 155).
73. Wilson, C.J., Orihuela, C.J., Mills, W.R., **Watson, D.A.**, and Niesel, D.W. 2002. Effects of growth temperature on *Streptococcus pneumoniae* virulence properties. Presented at the 102nd General Meeting of the American Society for Microbiology, abstr. No. D-20, p. 160.
74. Pandya, U., Gonzales, M., **Watson, D.A.**, and Niesel, D.W. 2002. Partial characterization of an *mga*-like homologue in *Streptococcus pneumoniae*. Presented at the 102nd General Meeting of the American Society for Microbiology.
75. Pandya, U., Dang, Y.D., Wilson, C.J., **Watson, D.A.**, and Niesel, D.W. 2002. Identification of a Histidine Kinase in *Streptococcus pneumoniae* that is Differentially Expressed at 33^oC and 37^oC. Presented at the 103rd General Meeting of the American Society for Microbiology.
76. Pandya, U., Dang, Y. D., Wilson, C.J., **Watson, D. A.** and Niesel, D.W. Identification of a Histidine kinase in *Streptococcus pneumoniae* that is differentially expressed at 33°C and 37°C. Sealy Center for Molecular Science Forum May 30, 2003. University of Texas Medical Branch, Galveston, Texas.
77. Pandya, U., Allen, C.A., **Watson, D.A.**, and Niesel, D.W. 2004. Global Profiling of *Streptococcus pneumoniae* Transcription as a Function of Growth Temperature. Presented at the 104th General Meeting of the American Society for Microbiology.
78. Allen, C.A., Pandya, U., **Watson, D.A.**, and Niesel, D.W. 2004. Global Transcriptional Profiling of *Streptococcus pneumoniae* in response to modeled microgravity. Presented at the 104th General Meeting of the American Society for Microbiology.
79. Biçmen, M., Ramaswamy, S.V., **Watson, D.A.**, Musher, D.M., Gür, D., and Gülay, Z. 2004. Analysis of mutations in the *pbp* genes of penicillin non-susceptible pneumococci from Turkey. Presented at the 14th European Congress of Clinical Microbiology and Infectious Diseases, Prague, Czech Republic.
80. Pandya, U., Sinha, M., Luxon, B.A., **Watson, D.A.**, and Niesel, D.W. 2005. Effect of Serial Passage on the Global Transcription Profile of *Streptococcus pneumoniae*. Presented at the 105th General Meeting of the American Society for Microbiology, paper H-054, Session 142.
81. Allen, C.A., Galindo, C.L., Pandya, U., **Watson, D.A.**, Chopra, A.K., and Niesel, D.W. 2005. Alterations in the Transcription Profile of *Streptococcus pneumoniae* Grown in High-Aspect Rotating Vessels Under Different Conditions of Normal Gravitation. Presented at the 15th International Academy of Astronautics Humans In Space Symposium, Paper I.9.4.
82. U. Pandya, **Watson, D.A.**, and Niesel, D.W. 2006. *Streptococcus pneumoniae* shows prominent differences in protein profiles with increasing *in vitro* serial

passage. Presented at the 106th *General Meeting of the American Society for Microbiology*.

83. U. Pandya, **Watson, D.A.**, and Niesel, D.W. 2006. Identification of a Potential Vaccine Molecule Following In Vitro Serial Passage of *Streptococcus pneumoniae* using a Proteomic Approach. Submitted for presentation at the *Texas Academy of Medicine, Engineering and Science Symposium "Bugs, Drugs and Vaccines: Securing Our Future,"* Galveston, TX, April 5-6, 2006.

Honors, Grants, and Fellowships

Honors:

Professional:

- 2006; Nominee for Mary and J. Palmer Saunders Excellence In Teaching Professorship, UTMB.
- 2005; *Who's Who in Medical Sciences Education*.
- 2004-05; Recognition by Editor of *J. Infect. Dis.* for exceptional manuscript review; top 10% in: reviews completed, timeliness of completion, and usefulness.
- 2004; Selected by committee of 1st year medical students to deliver *Keynote Lecture*, National Youth Leadership Forum on Medicine, UTMB.
- 2002; Nominee, *Distinguished Alumnus Award*, Lake Land College, Mattoon, IL
- 2001-2005; *Marquis Who's Who in America* (56th through 60th Eds.).
- 1999, 2001; *Who's Who in Medicine and Healthcare* (3rd & 4th Eds.).
- 1997; *American Men and Women of Science*.
- 1994; *Louis Weinstein Prize*, *Clinical Infectious Diseases* journal (for most outstanding clinically oriented published paper-1993).
- 1987-92; Awards every year for "*Exceptional Performance*"; 1987 & 1990 Additional awards for "*Sustained Superior Performance Resulting in Improvement of Operations*"; Veterans Affairs Medical Center (VAMC)-Houston.

Scholarship:

- 1986; Elected Full Member, *Sigma Xi* (as a graduate student).
- 1981; Elected to *Phi Kappa Phi*.
- 1980; Awarded *Adney Memorial, Wright, and Millikin Scholarships*, Millikin University.
- 1979; Elected to *Sigma Zeta* (undergraduate science honorary); Vice-President 1980-81.
- 1978; Named *James Millikin Scholar*, Millikin University.
- 1978; Named *Illinois State Scholar* (Illinois Student Assistance Commission).
- 1978; *Outstanding Math Student*, Neoga (IL) HS; Mathematics Association of America.
- 1976-77; 1977-78; *Who's Who Among American High School Students*.

Public Service:

- 2005; Council President's Award of Merit, Pearland ISD Council of PTAs.
- 2005; Honorary Life Member, Texas PTA, Awarded by Pearland ISD Council of PTAs.

- 2003; *Master Trustee Award*, Leadership TASB, (Texas Assoc. of School Boards).
- 1999-2001; *Quality Unit Awards*, Cub Scout Pack 466, Pearland, TX.
- 1988; 1989; *President's Bronze and Diamond Awards*, respectively, for service to the Texas Lions Camp for Special Children, Kerrville, TX.

Grants:

Research:

- 2006; National Center for Research Resources, Division of Clinical Research Resources, Institutional Clinical and Translational Science Planning Grant Award (P20); Co-I (PI James M. Musser, MD, Ph.D., Methodist Hospital Research Institute).
- 2002; National Institute for Allergy and Infectious Disease, Pathogen Functional Genomics Resource Center; pathogen-specific (*Streptococcus pneumoniae*) DNA Microarrays.
- 2001; Bristol-Myers Squibb, Contract Pneumococcal Serotyping, \$5000.
- 2000; NASA Office of Biological and Physical Research (98-HEDS-02), Co-PI (D. Niesel, PI), project entitled "*Streptococcus pneumoniae* Gene Expression and Virulence Potential in the Space Environment"; \$450,000.
- 1999; Texas Advanced Research Program (#004952-0090), Co-PI (D. Niesel, PI) project entitled "Bacterial Gene Expression During Pathogenesis: Gene Regulation and Novel Virulence Properties"; \$199,100.
- 1997-98, 2000-01; NASA Space Grant Graduate Fellowships for C. Orihuela, \$5000 ea.
- 1997; Sealy Foundation, \$25,000 + \$25,000 match, Dept. of Micro. & Immunol., UTMB.
- 1997; Boston Healthcare for Eli Lilly, \$20,000.
- 1996; McLaughlin Fellowship Fund, UTMB, Stipend for MSII R. Patel, \$1550.
- 1996; McLaughlin Fellowship Fund, UTMB, Stipend for MSII C. McClain, \$1550.
- 1995; North Dakota Pork Producer's Council, "Molecular characterization of *Streptococcus suis* isolates in Midwestern swine populations," \$1800.
- 1995; USDA EPSCoR, for Eric Clambey, Research Experience for Undergraduates Program, \$500 plus stipend.
- 1995; Co-Investigator, USDA Equipment Grant; Automated DNA Sequencer, \$80,000.
- 1994; North Dakota Branch, American Lung Association, "Molecular studies of *Streptococcus pneumoniae* encapsulation," \$2750.
- 1994; Governor's State, NDSU, student research of Jayme Steig, \$600.
- 1994; Dunhill Medical Trust Found. (UK), "Identification of adhesins on the surface of the Group B *Streptococcus* using a novel genetic method," Co-Investigator (Dr. R. Feldman, P.I.), \$180,000.
- 1994; Infectious Disease Research Institute (IDRI), "An examination of the effect of supply on efficacy of Todd Hewitt-Yeast Extract Broth in tube-dilution MIC," \$1200.
- 1993; NDSU, Research and Consulting Committee Grants-In-Aid Program, "Molecular aspects of transposon movement in pneumococci," \$3500.

- 1992; NASA-JSC, “Application of the polymerase chain reaction technique to microbiological questions relevant to long-term space flight,” Contract #70243, \$6000.
- 1981; University of Houston Student Research Grant Program, “Biochemical techniques for species determination in the dinoflagellate (Pyrrhophyta) gen. *Heterocapsa*,” \$300.

Workshops and Training:

- 1996; Visiting Scientist Travel, IDRI.
- 1995; 1996; Microbiological training, Centers for Disease Control (CDC), IDRI.
- 1992; Austin Spring DNA Symposium,” Univ. of Texas at Austin; funding from National Science Foundation (NSF).
- 1990; Travel Grant, 3rd International Conference on Streptococcal Genetics, ASM.
- 1989; NSF Travel Fellowship, 33rd Wind River Conference on Genetic Exchange.

Meetings Support:

- 1994; Guest Lecture by Dr. M. Gentry, Dean’s Office, NDSU, \$300.
- 1994; Support for North Dakota Academy of Sciences Symposium “Molecular Approaches to the Study of Bacterial Pathogenesis”:
 - Continuing Medical Education Office, MeritCare Medical Center, Fargo, ND, \$400.
 - North Dakota Exptl Pgm to Stimulate Competitive Research (EPSCoR), \$1100.
 - The Upjohn Company, Kalamazoo, MI, \$1500.

Fellowships:

- 1992; Utrecht Institute of Infectious Diseases and Immunology, The Netherlands, “Characterization of a protease-sensitive virulence factor of pneumococci,” *Dfl.* 80,000.

Scholarly Works in Progress

1. Allen, C.A., Pandya, U., Williams, N., **Watson, D.A.**, and Niesel, D.W. 2006. A Global Transcriptional Analysis of *Streptococcus pneumoniae* in Response to Low-Shear Modeled Microgravity. (In Press; *Gravitational and Space Biology*).
2. Allen, C.A., Galindo, C.L., Pandya, U., **Watson, D.A.**, Chopra, A.K., and Niesel, D.W. 2006. Alterations in the Transcription Profile of *Streptococcus pneumoniae* Grown in High-Aspect Rotating Vessels Under Different Conditions of Normal Gravitation (In press; *Acta Astronautica*).

Other Research and Creative Achievements

Invention Disclosures and Patent Applications:

- 2000; Co-submitter of Invention Disclosure and Patent Application with D. Niesel and C. Orihuela for “Pathogen-Specific DNA Microarrays”.
- 1997; Co-submitter of Invention Disclosure with T. Chan, UTMB for “Novel Anti-Cancer Therapeutic DNA Vaccines”.

Consulting and Collaboration:

- 2004; Proactive Medical Technologies (Technology Investment Analysis), Consultant.
- 2003; UTMB, Office of the Vice President for Research (Dr. Adrian Perachio), Consultant, International Space Station Research Institute Procurement.
- 2002-03; Salem Partners (Investment/Venture Capital); Technology Feasibility Consultant.
- 2002; SpaceHab, Inc.; Consultant, Red Team Member, and Section Author, NASA-JSC, Bioastronautics Procurement (Subcontract #C-802-314).
- 1998-2005; Veterans Affairs Medical Center-Houston, Director of the Pneumococcal Reference Serotyping Laboratory.
- 1998-99; InDyne, Inc./NASA Headquarters Office of Life and Microgravity Sciences and Applications, Washington, D.C., Peer Review Administrator-Cell & Molecular Biology.
- 1997; Medscape.com, Inc., Consultant, Biomedical Information/CME, NYC.
- 1997; InDyne, Inc./NSBRI, Peer Review Administrator, Washington, D.C.
- 1996-1997; Virus Reference Laboratories, Inc., Houston, TX, Consultant.
- 1996-; CDC, Atlanta, GA, Pneumococcal typing, Streptococcal Reference Laboratory.
- 1996; CDC, Atlanta, GA, Sharing of monoclonal antibodies (MTA # CID-R96972-00).
- 1995-96; Cytastar, Inc., Houston, TX, Consultant.
- 1994; SPIT Team, VAMC Minneapolis, MN, Consultant.
- 1992; Division of Infectious Diseases, Erasmus University, Rotterdam, NL, Consultant.
- 1992; Software Marketing Inc., Phoenix, AZ, Workbook author/development consultant.

PROFESSIONAL SERVICE

Governance and Other Professionally Related Service

North Dakota State University:

- 1993-95; Member, Steering Committee, Natural Resources Management Program.
- 1993-95; Member, Steering Committee, Cellular & Molecular Biology Graduate Program.

University of Texas Medical Branch:

- 2004-2005; Chair, Committee in Support of Science Education, Office of Educational Outreach.
- 1997; Member, Graduate Admissions Committee, Dept. of Microbiol./Immunol.

National Space Biomedical Research Institute:

- 1997-2001; Executive Secretary, NSBRI Industry Forum.

Texas Woman's University:

- 2006; Member, Executive Council, TWU Houston campus.

Service Activities for the University, College, Component

VAMC-Houston, Infectious Disease Research Laboratories:

- 1991-92; Office Automation/Local Area Network Coordinator.
- 1991; Coordinator, Visiting Scientists/Seminar Speakers.
- 1991; Replacement Facility Relocation Coordinator.
- 1986-92; Equipment and Chemicals Safety and Inventory Control Officer.
- 1986-92; Radiation Safety Officer.

North Dakota State University:

- 1994-95; Coordinator for Molecular Biological Reagents Centralization Initiative, Dept. of Veterinary & Microbiological Sciences (VMS).
- 1994-95; Coordinator, Indirect Cost Recovery/Common Use Equip. Acquisition, VMS.
- 1994-95; Transgenics Subcommittee of joint USDA-NDSU Greenhouse Committee.
- 1994-95; Research & Teaching Subcommittees of Strategic Planning Committee, VMS.
- 1994; Symposium Organizer & Committee on Local Arrangements; Joint Annual Meetings, ND & MN Academies of Science.
- 1994; Chair, scientific session, Pediatric Week Holland, Erasmus University, NL.
- 1993-95; Member, University-Wide Safety Committee.
- 1993-95; Safety Officer, VMS.
- 1993-95; Curriculum Review Committee, VMS.

University of Texas Medical Branch:

- 2004-Present; Member, Website Committee, Dept. of Microbiol./Immunol.
- 2005; Invited Participant and Environmental Microbiology Working Group Lead, Bioastronautics Technology Forum '05 (UTMB-NASA JSC Partnering Initiative).
- 2001; Member, Search Committee, Microbial Genomics faculty position, Dept. of Microbiology & Immunology and Center for Bioinformatics.
- 1997-2001; Doctoral Dissertation Co-Mentor-C. Orihuela, Dept. of Microbiol./Immunol.
- 1996-99; Instructor/Advisor, Summer Science Camp (*Recognized in 1999 for extended service to the camp as a Preceptor*).
- 1995-97; Associate Member, Graduate School of Biomedical Sciences (GSBS).
- 1996-97; GSBS Graduate Student Recruitment Committee.

National Space Biomedical Research Institute:

- 2003; Invited participant, Education and Outreach Future Directions Workshop.
- 2002; NSBRI representative, World Space Congress (2nd decadal-Houston, TX).
- 2000; Principal Organizer, Industry Forum Roundtable, Second Biennial Retreat:
 - Intellectual Property Issues for the Bench Researcher.
- 2000; Ex-officio member, Industry Forum committees to prepare white papers:

- Intellectual Property Issues Related to Industry Forum Participation in Commercialization of Technologies Developed by National Space Biomedical Research Institute Research Teams.
- Issues Related to Fast-tracking of FDA Approvals for Pharmaceutical Countermeasures against the Effects of Microgravity on the Human Body.
- 2000; Chair of committee to update Industry Forum charter.
- 1999; NSBRI representative, Inspection '99, Johnson Space Center, Houston, TX.
- 1998; NSBRI representative, Inspection '98, Johnson Space Center, Houston, TX.
- 1998; Principal Organizer, Industry Forum Roundtables, Institute Summer Retreat: Technology Development; Spacecraft Crew Health; and Telemedicine.

InDyne, Inc.:

- 2005; Past Performance Volume Author, Procurement Writing Team, NASA Headquarters Information Technology Support Services Contract (Prime Contractor, InDyne, Inc.).
- 2004; Pink Team/Red Team Reviewer, NASA Consolidated Peer Review Contract Re-competition (Prime Contractor, The Ventura Group).
- 2003-04; Technical Volume Lead Author, Procurement Writing Team, Department of Veterans Affairs Peer Review (Prime Contractor, The Ventura Group).
- 2002; Member, Procurement Team, (Prime contractor-Veridian Engineering) NASA-Johnson Space Center Bioastronautics Support Consolidation Contract:
 - Member, Capabilities Briefing Development/Competitive Assessment groups.
- 1999-2001; Contributing Writer, The Idiom (Corporate Quarterly Newsletter).
- 1998-99; Y2K Computer Readiness Task Force.

The University of Texas System:

- 2006; Co-author, Office of Research and Technology Transfer component of UT System 10 year strategic plan (and of whitepaper “Value Added By Research & Tech Transfer” to be included as an appendix), final version released September, 2006.
- 2006; Invited Participant, “Critical Thinking Curriculum Model Assessment Workshop”, Advanced Concepts Group, Sandia National Laboratories.

Texas Woman’s University:

- 2006; Member, Ad hoc Committee on Local Arrangements, TWU Houston Grand Opening Celebration.
- 2006; Member (Ex officio), IRB Chairs Committee.
- 2006; Member, TWU Houston Subcommittee of university-wide Committee on Pandemic Influenza Preparedness.

Professionally-Related Service

Editorial:

- 2002-Present; Member, Editorial Board, Web Site “The Virtual Museum of Bacteria,” <http://www.bacteriamuseum.org> (sponsor, Foundation for Microbiology).
- 2003-2005; Member, Editorial Board, BayRunner Magazine, Seabrook, TX

- 1993-96; Member, Editorial Board, *Serodiagn. Immunother. Infect. Dis.*
- 1993-95; Co-Editor with K. Verduin, H. van Dijk, and J. Verhoef, Constitutional Resistance to Infection. Medical Intelligence Unit, R. G. Landes Co., Austin, TX.

Review and Advisory:

Manuscript Review:

- 1997-Present: *Clinical Infectious Diseases; American Journal of Respiratory and Critical Care Medicine; Journal of Infectious Diseases; Emerging Infectious Diseases; Infection & Immunity; Ophthalmic Research; Advances in Space Research; Journal of Clinical Ligand Assay; Journal of Microbiological Methods; Laboratory Medicine.*

Grants Evaluation:

- 2001; McLaughlin Fellows Competitions, UTMB.
- 1999, 2002; United States Department of Veterans Affairs Central Offices:
 - Research Career Scientist Program (1999; 2002).
 - Merit Review Grant Program, Infectious Diseases Board (1999).
- 1997; U.S. Civilian R&D Foundation for the Independent States of the Former Soviet Union, Collaborations in Biomedical and Behavioral Sciences Grants Program.
- 1996; Dept. of Microbiology & Immunology, UTMB; Dept. Grants Review Panel
- 1993-2003; United States Department of Agriculture National Research Initiative.

Advanced Placement (AP) Student/Course Evaluation:

- 2002-05; Faculty Reader/Grader, AP End-of-Course Exam in Biology, Educational Testing Service (Princeton, NJ).

Faculty Evaluation:

- 2001; Creighton University School of Medicine, Office of the Dean.
- 1995; Creighton University, Dept. of Medical Microbiology & Immunology, Promotion and Tenure Evaluation Committee, External Reviewer.

Advisory Boards:

- 2006; Southeast Texas (Educational Service Centers IV and V), Science, Technology, Engineering, and Math (T-STEM) Center, University of Texas Medical Branch; External Advisory Board

Memberships in Professional Societies

- 2006-Present; Confederation of Meningitis Organizations, Elected Full Member.
- 2002-Present; National Association of Science Writers (includes Press Credentials).
- 1998-Present; American Society for Gravitational and Space Biology.
- 1997-Present; Coalition for Excellence in Science and Math Education.
- 1992-Present; Lancefield Society (Streptococcal Genetics).
- 1989-Present; Texas Branch of the American Society for Microbiology.
- 1989-Present; American Society for Microbiology (ASM).

- 1988-Present; American Association for the Advancement of Science.
- 1986; Sigma Xi.

Other Community Outreach Achievements

Public and Higher Education:

- Pearland (TX) Independent School District (PISD):
 - 2001-05; Elected Member, Board of Trustees, PISD (201 cumulative CEC hrs)
 - 2004-05; Elected and Re-elected Board President.
 - 2005; Member, Teacher of the Year Selection Committee.
 - 2001-05; Celebrity Reader, PISD Elementary Schools.
 - 2003; Master Trustee Certification, Texas Association of School Boards.
 - 2001-02; Member, Policy & Technology Committees.
 - 2002; Level I Board Member Certification, TASB.
 - 2001, 2003, 2005, 2006; Bond Referendum Spokesperson.
 - 2001, 2003; Elected Delegate-TASB Annual Convention.
 - 2000-01; Mentor, GLAD Program, Rustic Oaks Elementary School.
 - 1999; PISD Parent Rep. to Region IV G/T Educator certification course.
 - 1999; PISD Council of PTA's Scholarship Selection Committee Member.
 - 1998-2000; PISD Steering Committee, Gifted/Talented (G/T) Programs:
 - 2000; Subcommittee to review strategic planning for PISD G/T services.
 - 1999; Subcommittee on revisions, G/T identification, grades K-4.
 - 1999; Subcommittee to recommend changes/additions to PISD G/T services.
- Houston-Galveston Area Council:
 - 2004, 2005; Elected to two terms on Board of Directors.
 - 2005; Member, Projects Review Committee.
 - 2004-05; Member, Legislative Affairs Committee.
 - 2003; Elected Alternate to Board of Directors.
 - 2001-05; Elected Delegate-General Assembly.
- Pearland College Center (PCC) of Alvin (TX) Community College:
 - 2002-2003; Member, Board of Governors and Executive Council.
 - 2002-2003; Educational Liaison to Pearland ISD
- Member of Parent Advisory Councils:
 - 1998-99; Sablatura Middle School (Pearland, TX).
 - 1997-98; Jamison Middle School (Pearland, TX).
 - 1996-2000; Rustic Oak Elementary School (Pearland, TX).
- Texas Association for the Gifted and Talented (TAGT):
 - 2000; Co-founder of GAP (Great Academics for Pearland), TAGT affiliate.
 - 1998-2006; Parent Member, TAGT (annual meeting attendee 2000, 2002).

Community:

- Member, Mayor's Select Committee on Higher Education, Pearland, TX, 2003-05
- Member of Lions Club (Friendswood, TX):
 - 1988-92; Chair, Community Blood Drives (>200 units collected).

- 1988-91; Chair, Scholarship Committee.
- 1988-89; President.
- 1987-92; Chair, Public Schools Anti-drug program/“CHICKEN” mascot.
- 1987-88; 1989-90; Secretary.
- Boy and Girl Scouts:
 - Bay Area Council, TX:
 - 2005; Member, Board of Directors.
 - 2005; Cub Scout Roundup Chairperson (**3.9% membership increase**).
 - 2003-04; Steering Committee, Friends of Scouting Charitable Campaign.
 - Northern Star District, Bay Area Council, TX.
 - 2004-05; Co-Chair, Friends of Scouting Charitable Campaign (**100% District**).
 - 2003-04; Co-Chair, Friends of Scouting Charitable Campaign (**100% District**).
 - 2003; Guest Scientist, Cub Scout Day Camp.
 - Mustang District, Bay Area Council, TX:
 - 2006; Program Transitions Chairperson
 - 2002; District Committee Finance Chairperson.
 - 2001-02; Chair, Friends of Scouting Charitable Campaign (**100% District**).
 - 1997, 1999-2005; Den Leader, District Twilight Camp.
 - 1998-99; Steering Committee, “Things That Go”.
 - North Fargo (ND) Girl Scouts Service Unit:
 - 1995; Camp Scientist, Girl Scout Day Camp.
 - Cub Scout Pack 466 (Pearland, TX):
 - 2003-05; Den Leader.
 - 1997-2001, 2006-; Committee Chair (**Quality Unit Awards 1999, 2000, 2001**).
 - 1996-1997; Fundraising Chair.
 - Boy Scout Troop 464 (Pearland, TX):
 - 2003-06; Committee Member

Scientific:

- Served as a judge for 17 competitions at multiple levels: middle school, junior and senior high school; undergraduate, graduate, and medical; and post-doctoral; 1993-Present.

OTHER

Significant Professional Development Activities

Scientific Techniques:

- 1996; PCR Diagnostics Workshop, 96th ASM General Meeting.
- 1995; 1996; Advanced Pneumococcal Serotyping, Streptococcal Reference Lab, CDC.

- 1991; Workshop “Molecular Techniques in the Clinical Microbiology Lab,” Texas ASM.
- 1989; Advanced Cosmid Cloning Techniques, University of Washington.
- 1989; Plasmid Cloning Techniques, Baylor College of Medicine.
- 1988; Pneumococcal Transformation Techniques, University of Alabama at Birmingham.
- 1988; Introduction to Molecular Biology, Baylor College of Medicine.
- 1987; Leukocyte Functional Assays, Baylor College of Medicine.
- 1986; High Performance Liquid Chromatography Instrumentation, University of Houston.

Grant Proposal Preparation:

- 1997; Advanced Research Program, Texas Higher Education Coordinating Board.
- 1997; Branch Chief, Organ Systems and Toxicology, NIEHS.
- 1996; Retired Scientific Review Administrator (SRA), NIH Toxicology Study Section.
- 1995; Chief SRA, Division of Research Grants, NIH.
- 1995; Director, Research & Medical Programs, American Heart Association.
- 1994; Informational Session, USDA National Research Initiative Proposals.
- 1994; USDA Midwest Regional Grants Workshop, Purdue University.
- 1993; Grantsmanship Seminar, Office of Graduate Studies and Research, NDSU.
- 1993; Grant-In-Aid Seminar, Office of Graduate Studies and Research, NDSU.

Teaching:

- 2001; “Effective Exam Questions,” Office of Educational Development, UTMB.
- 1994; “Introduction to Multimedia Teaching Techniques,” Mini-course, NDSU.
- 1994; “Advanced Multimedia Teaching Techniques,” Mini-course, NDSU.
- 1994; North Central Region Teaching Symposium, University of Nebraska, Lincoln.
- 1993; Reflective Teaching Portfolio Training Session, NDSU.
- 1993; “Creating a Syllabus,” Workshop, NDSU.

Miscellaneous:

- 2002; Advanced Project Management for Government Contracts: Cost Control; Earned Value Management; and Task/Delivery Order Management; all with SpaceHab, Inc.
- 2002; Level I Board Member Certification; Texas Association of School Boards.
- 2002; Shipley Method, Government Procurement Proposal Writing; Veridian, Inc.
- 1996; Techniques for Interviewing Prospective Medical Students-Workshop, UTMB.
- 1994; Personality Typing Faculty Development Workshop, NDSU.
- 1994; QA/QC Workshop; American Association of Veterinary Lab Diagnosticians.
- 1993; Time Management for Professionals Workshop, NDSU.
- 1992; Local Area Network Management Training-Level I, VA Medical Center, Houston.

- 1992; Introduction to MS Windows 3.0/LANs, Business Systems Group, Houston, TX.