

**David A. Watson, Ph.D.**  
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## SUMMARY OF QUALIFICATIONS

- Administrator and scientist with 22 year background and demonstrated achievements in laboratory management, academic research and teaching, and educational governance
- This unusual breadth of professional experiences makes possible exceptional capacity to facilitate interactions and collaborations across the research enterprise
- Additional CV detail at [http://www.faywatson.com/daw/documents/DrDAW\\_cCV.pdf](http://www.faywatson.com/daw/documents/DrDAW_cCV.pdf)

## EDUCATION

- Ph.D. Molecular Biology (*Honors Pass*), University of Houston, TX (1991)
- M.S. Marine Biology, University of Houston, TX (1986)
- B.S. Biology (*Magna Cum Laude*) Millikin University, Decatur, IL (1981)

## PROFESSIONAL EXPERIENCE

### **Director, Houston Office of Research**

*Texas Woman's University Institute of Health Sciences, Houston, TX (2006-Present)*

- Currently facilitating research and representing university to Texas Medical Center, as well as organizing and implementing research activities and sponsored programs
- Co-PI for proposal (\$30M/5 yrs) submitted 11/6/07 via The Methodist Hospital Research Institute to NIH to create Houston Center for Clinical and Translational Sciences

### **Associate Vice Chancellor for Sandia Operations, Office of Research & Tech Transfer**

*The University of Texas System (Sandia National Labs), Albuquerque, NM (2005-2006)*

- Initiated transition from internal to external review system for basic research for Sandia National Laboratories, including creation and seating of new external science advisory board
- Served as liaison for Sandia-UT System collaborative research; identified new opportunities for joint Sandia UT System research proposals
- Enabled delivery of postgraduate/professional, and P-16 educational outreach efforts from UT System institutions to Sandia National Labs

### **Assistant Professor to Adjunct Professor, Department of Microbiology & Immunology**

*University of Texas Medical Branch (UTMB), Galveston (1995-Present)*

- Have taught extensively in graduate and medical schools; mentor for graduate and medical student rotations; co-advisor for two completed dissertations
- Productivity: 11 scientific papers; 21 abstracts; 9 invited lectures
- Contributed service: Dept., Graduate School, and Medical School committees, including graduate student recruitment and graduate/medical student admissions
- Other activities: Director, Summer Undergraduate Research Program (1996-97) and Summer High School Student Research Program (2004-05)

### **Program Manager, National Space Biomedical Research Institute (NSBRI) Peer Review**

*InDyne, Inc., Houston, TX (1997-2005)*

- Prepared, negotiated, and implemented series of scientific peer review contracts for aggregate total of c. \$4M; administered review of c.700 research and education/outreach proposals; managed up to 20 staff (Ph.D./M.D., other scientific, IT, logistics) which led to grants portfolio of \$25M/year; responsible for Board of Scientific Counselors

- Other activities:
  - *NSBRI*: Executive Science and Medicine Council; Industry Forum (three terms elected Executive Secretary); helped to develop NASA Research Announcements; created, and assisted in field-testing of programmatic relevance/scientific merit metrics
  - *InDyne*: member, proposal teams to capture Government contracts; experiences as Pink Team/Red Team Reviewer and Technical Volume Lead Author

### **Assistant Professor, Department of Veterinary & Microbiological Sciences**

*North Dakota State University, Fargo (1993-95)*

- Taught undergraduate, graduate, service courses; coordinator for deptl. seminar and journal club; mentor for undergraduate and graduate students; advisor for completed thesis
- Productivity: 7 scientific papers; 7 abstracts; 14 invited lectures
- Contributed committee service: university-wide Safety; joint NDSU-USDA Transgenic Plants Safety; Graduate Cell & Molecular Biology Steering; and Natural Resources Interdisciplinary Management Program
- Other activities: hosted summer students for North Dakota USDA EPSCoR (1993), and Governor's School (1994)

### **Postdoctoral Fellow in Molecular Microbiology**

*Baylor College of Medicine, Houston, TX (1991-92)*

*Academic Hospital Utrecht, The Netherlands, (1992-93)*

- Netherlands (NL) Fellowship--competitive grant from Dutch government
- Conducted research on molecular basis for bacterial pathogenesis in humans
- Productivity: 10 published papers; 27 abstracts; 19 invited lectures; consultant across NL

### **Chief Research Technician and Laboratory Manager, Infectious Disease Section**

*Veterans Affairs Medical Center, Houston, TX (1986-91)*

- Supervised research technicians; coordinated residents/fellows research; Radiation/Chemical/Biological Safety Officer
- While carrying out above full-time duties, also completed graduate coursework and dissertation research, University of Houston (1988-91) to earn PhD in Molecular Biology
- Productivity: 10 papers, 13 abstracts, 3 invited lectures

### **SELECTED RESEARCH FUNDING**

- National Institute for Allergy and Infectious Disease, Pathogen Functional Genomics Resource Center; *Streptococcus pneumoniae* DNA Microarrays (2002)
- NASA Office of Biological and Physical Research (98-HEDS-02), Co-PI (D. Niesel, PI), project "*Streptococcus pneumoniae* Gene Expression and Virulence Potential in the Space Environment"; \$450,000 (2000) *N.B. Experiment carried on Missions STS-118 and STS-123, 8/8-21/07 and 3/11-26/08*
- Texas Advanced Research Program (#004952-0090), Co-PI (D. Niesel, PI) project "Bacterial Gene Expression During Pathogenesis: Gene Regulation and Novel Virulence Properties"; \$199,100 (1999)

### **SELECTED HONORS AND AWARDS**

- Honorary Life Member, Texas PTA, Awarded by Pearland ISD Council of PTAs, 2005
- *Who's Who in America*, 56<sup>th</sup>-60<sup>th</sup> Editions (2001-2005)
- Selected by committee of 1<sup>st</sup> year medical students to deliver *Keynote Lecture*, National Youth Leadership Forum on Medicine, UTMB (2004)

- *Louis Weinstein Prize, Clinical Infectious Diseases* journal, for most outstanding clinically oriented published paper (1993)
- Awards for “*Exceptional Performance*” (1987-92), and “*Sustained Superior Performance Resulting in Improvement of Operations*,” (1987, 1990), VA Medical Center-Houston
- Elected to Sigma Zeta (1980); Phi Kappa Phi (1981); and Sigma Xi (1986)

#### SELECTED ADDITIONAL ACCOMPLISHMENTS

- Invited Guest: on Radio Programs: “Science Studio”; KTEP 88.5 FM, El Paso, TX (2006); “High Tech New Mexico”; KKOB 770 AM, Albuquerque, NM (2006).
- Testified before Texas House of Representatives Public Education Committee on behalf of Texas Association of School Boards (March and April, 2005)
- Reviewer of scientific manuscripts for numerous journals, e.g. *J. Infect. Dis.*, *Emerg. Infect. Dis.*, *Infect. Immun.* (1997-Present)
- Reviewer of grant proposals for multiple federal agencies, e.g. Dept. of Veterans Affairs, USDA, U.S. Civilian R&D Foundation, NASA (1997-Present)
- Reader, AP End-of-Course Exam in Biology, Educational Testing Service (2002-04); External Auditor, AP course syllabi for Biology; English IV, Pearland (ISD) HS (2007)
- Texas Association of School Boards Leadership Institute-Master Trustee Graduate (2003)
- Supervisor/mentor for 20 science fair projects (1989-2000); judge for 19 science competitions at wide variety of educational levels (1997-2008)

#### NOTABLE PUBLIC SERVICE

- Board of Trustees, Pearland, TX School District (2001-05; President, 2004-05)
- Executive Board, Bay Area (TX) Council, Boy Scouts of America, 2005
- Board of Directors, Houston-Galveston Area Council (2003-2005)
- Mayor’s Select Committee on Higher Education, City of Pearland, TX (2003-2005)
- Charter Member, Friendswood, TX Lions Club (1986-92; President 1988-89)

#### SELECTED PUBLICATIONS

*Chosen from a total of 49 scientific papers, 87 published scientific abstracts, and 221 feature articles, guest editorial opinions, book and website reviews, and monthly columns. For complete bibliography: [http://www.faywatson.com/daw/documents/DrDAW\\_cCV.pdf](http://www.faywatson.com/daw/documents/DrDAW_cCV.pdf)*

#### Scientific Papers (from 49 total):

1. 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.
2. **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.
3. 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.
4. **Watson, D. A.** 1993. Unusual mutation mechanisms and evolution. *Science.* 260:1958-1959.
5. **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 (Permanently included: *Profiles in Science: The Oswald T. Avery Collection, National Library of Medicine*, <http://profiles.nlm.nih.gov/CC/G/M/G/F/ /ccgmfg.pdf>)
6. 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.
7. **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.
  8. 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.
  9. Orihuela, C. J., and **Watson, D. A.** 1997. Poor man's dot blot apparatus. *BioTechniques* 23(6):1010.
  10. **Watson, D. A.** 1999. "It's time to stop counting beans", *Nature*, 398: 280.
  11. 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.
  12. **Watson, D.A.**, Davis, B.R., and Niesel, D.W. 2001. "Undergraduates must learn to communicate..." *Nature* 411:992.
  13. 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.
  14. Pandya, U., Allen, C.A., **Watson, D.A.**, and Niesel, D.W. 2005. Global Profiling of *Streptococcus pneumoniae* Transcripts at Different Growth Temperatures, *Gene*: 360:45-54.
  15. 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. *Acta Astronautica*: 60:433-444.

Scientific Abstracts (from 87 total):

1. **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*.
2. **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.
3. 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.
4. 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.
5. 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.

6. 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.
7. 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*.
8. 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 101<sup>st</sup> General Meeting of the American Society for Microbiology, abstr. No. H-41, p. 401.
9. Pandya, U., Dang, Y.D., Wilson, C.J., **Watson, D.A.**, and Niesel, D.W. 2003. Identification of a Histidine Kinase in *Streptococcus pneumoniae* that is Differentially Expressed at 33<sup>0</sup>C and 37<sup>0</sup>C. Presented at the 103<sup>rd</sup> General Meeting of the American Society for Microbiology.
10. 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 14<sup>th</sup> European Congress of Clinical Microbiology and Infectious Diseases, Prague, Czech Republic.
11. Pandya, U., **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. Presented at the *Texas Academy of Medicine, Engineering and Science Symposium "Bugs, Drugs and Vaccines: Securing Our Future,"*.

General Interest Publications (from 220 total):

*Feature Articles:*

1. **Watson, D. A.** 1997. "Too Much Technology?" *Lab. Med.* 26(2): 96
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.** 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.
4. **Watson, D. A.** 2003. "Higher Ground (Part 2 in a series)" *Texas Lone Star (Feature Story)*, 21(2):13-14.
5. **Watson, D. A.** 2004. "Seeing the Forest—and the Trees (Part 3 in a series)" *Texas Lone Star (Cover Story)*, 22(8):6-9.
6. **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.** 2004. "On Surveys and TAKS Testing," The Pearland Reporter News, 34(43): p. 3.
3. **Watson, D. A.** 2005. "Educating Blueberries," The Pearland Reporter News, 35(33): p. 3.
4. **Watson, D. A.** 2005. "Why Scouting Still Matters," The Galveston Daily News, September 9, 2005.
5. **Watson, D.A.**, 2007. "When Scholars Plagiarize," The Chronicle of Higher Education (The Chronicle Review Section), 53(48): p. A35.

*Book, Website, and Other Reviews:*

1. **Watson, D. A.** 1997. Web Site Review, "MEDSCAPE." *American Society for Microbiology News*, 63(2): 103.
2. **Watson, D. A.** 2002. Book Review, "Betrayal of Trust: The Collapse of Global Public Health," *American Society for Microbiology News*, 68(11): 576-577.
3. **Watson, D. A.** 2004. Book Review, "Antibiotics: Actions, Origins, Resistance," *American Society for Microbiology News*, 70(7):340.

*Education-Related:*

1. Elliott, D. S. and **Watson, D. A.** 1992. *Teacher's manual* to accompany educational software package entitled "Bodyworks", 157 pp., Access Laser Press, Phoenix, AZ, and Software Marketing Corporation, Phoenix, AZ.

*Monthly Columns:*

The Baycomber (Bay Group Publishing Co.)- *Left Brain Column*

1. July 1999, "Why Spend for Science?," 1(1):20.
2. June 2000, "Addiction in America," 2(6):21.
3. August 2000, "Muggle-Born, but Hogwarts-Bound: In Praise of Harry Potter (and J.K. Rowling)," 2(8):21.
4. December 2000, "Rocket Boys and Handy Dads," 2(12):40.
5. May 2001; "The Wisdom of the Aged," 3(5):18.
6. September 2001; "The Most Precious Thing We Have," 3(9):36.
7. April 2002; "Two Little Old Men," 4(4):8.
8. May 2002; "In Defense of Clutter," 4(5):8.
9. September 2002; "Books and Bibliophiles," 4(9):12.
10. October 2002; "Craftsmanship," 4(10):16.
11. December 2002; "The Sweetest Sound," 4(12):12.

BayRunner (Bay Area Media Services) – *Dr. Watson*

1. July 2003; "On Learning to Fly," 10(6):12.
2. December 2003; "Small Towns and Big Families." 10(9):6.
3. March 2004; "Building Castles in the Sand." 11(2):10.
4. May 2004; "Gentle Into That Good Night." 11(4):8.
5. November 2004; "One Silver Dollar." 11(10):10.
6. April 2005; "Joy and Pain." 12(3): 10.
7. July 2005; "Why Johnny Can Read (If He Wants To)." 12(6): 12.
8. November 2006; "In Praise of Blue Highways and Rural Places: An Ode to Leon and Least Heat." 13(11): 6, 14.