**NAME:** David E. Briles, Ph.D.

FIELD OF SPECIALIZATION: Bacterial Pathogenesis and Vaccines

ADDRESS, WORK: Department of Microbiology

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University of Alabama at Birmingham

Birmingham, Al. 35294

ADDRESS, HOME: 760 Linwood Road

Birmingham, AL 35222

**PHONE NUMBER (work/home/FAX)** (205) 934-6595 / (205) 595-9250 / (205)-934-0605

E-MAIL dbriles@UAB.EDU

URL http://www.microbio.uab.edu/faculty/briles/index.html

BIRTHDATE AND PLACE: May 26, 1945, New York, New York

**EDUCATION:** The University of Texas, B.A., 1967 (worked in the UT Genetics

Foundation under Wilson Stone, Member Natl. Acad)

The Rockefeller University, Ph.D., 1973

**POSITIONS HELD:** 

Graduate Fellow The Rockefeller University, New York, New York

1967-1969 (with Dr. C.A. Williams, PhD) Laboratory of Biochemical Genetics (Edward Tatum, PhD, Lab

Head)

1969-1973 (with Dr. R.M. Krause, MD)

Laboratory of Immunology and Immunochemistry (Maclyn

McCarty, MD, Lab Head)

USPHS and USNIH Research Fellow Washington Univ. School of Med., St. Louis, Missouri

1973-1975 (with J. M. Davie, MD/PhD) Department of Pathology

Research Instructor Department of Microbiology and Immunology

1975-1978 (with J. M. Davie, MD/PhD) Washington Univ. School of Med., St. Louis, Missouri

Visiting Lecturer Spring 1977 Department of Biology, Univ. Southern Illinois,

Edwardsville, Illinois

Assistant Professor 1978-1982 Department of Microbiology

University of Alabama at Birmingham (UAB)
Member of Tumor Institute with Max Cooper

Associate Professor 1982-1985 Department of Microbiology, UAB

Associate Professor 1984-1988 Department of Pediatrics, UAB
Professor 1985-Present Department of Microbiology, UAB

Professor 1988-Present Department of Pediatrics, UAB
Professor 1988-Present Department of Genetics, UAB

Professor 1989-2002 Department of Comparative Medicine, UAB

(department dissolved in 2002)

Adjunct Prof, of Biology 2000-Present Biology, Northern Illinois University, DeKalb, Illinois

Adjunct Professor 2006-2012 Arizona State University, Tempe, Arizona Adjunct Prof. of Pharmacy 2009-2013 SungKyunKwan University, Suwon, Korea

**RESEARCH CENTER AFFILIATIONS:** 

Associate Scientist 1978-1983 Comprehensive Cancer Center, UAB

Scientist	1983-present	Comprehensive Cancer Center, UAB
Scientist	1988-present	Comprehensive Arthritis Center, UAB
Scientist	1993-present	Immunobiology Vaccine Center, UAB
Co-Director	1995-2000	Immunobiology Vaccine Center, UAB
Scientist	1005 procent	Contar for Aging

Scientist 1995-present Center for Aging

Senior Scholar 2000-present Sparkman Center for International Health Education
Member 2008-present UAB Center for Biophysical Sciences and Engineering

# **OTHER PROFESSIONAL ACTIVITIES**

OTHER PROF	ESSIONAL ACTIVITIES
UAB:	
1979-present	Immunology and Bacterial Pathogenesis for medical, dental, and graduate students.
1980-1985	Member, Animal Services Advisory Committee,
1985 - 2002	Member of the Molecular and Cellular Biology Steering Committee
1985 - 1989	Member, Cellular and Molecular Biology Steering Committee
1987 -2010	Director of the Infectious Diseases Research Training program
1985-1986	Cellular and Molecular Biology Admissions Committee,
1986-present	Member of Microbiology Graduate Steering Committee
1988-1989	Acting Director of Molecular and Cellular Biology Graduate Program
1985-1986	Member, Search Committee for Bacterial Genetics, Department of Microbiology
1986	Member, Search Committee for Chairman of Comparative Medicine Department
1978-1987	Director of Animal Care for the Cellular Immunobiology Unit of the Cancer Center
1985 -1990	Co-Director, Molecular and Cellular Biology Graduate Program
1985-1990,	Review Committee of the Cancer Center
1992-1994	Review Committee of the Cancer Center
1988-1990	Member of Vice Presidents Committee for Genetics Development
1988-present	Promotions Committee
1989-1991	Review Committee of the Comprehensive Arthritis Center
1989-2010	Director of Graduate Training in Molecular and Cellular Microbial Pathogenesis
1990-1991	Department of Microbiology Seminar Series Committee
1994-1996	Co-Chair Search Committee for Bacterial Pathogenesis
1995	Search Committee for Geographic Medicine
1995-2000	Departmental Research Development Committee
1997-1999	Search Committee for Provost
1997-2003	Search Committee for Bacterial Pathogenesis
2003-2005	Microbiology, Promotions Committee Chair
2004-2006	Immunology Search Committee
2006	Infectious Disease Search Committee
2006	Bacterial Genetics and Pathogenesis Search Committee
2007-2017	Scholarship Committee SOM
2009-2012	SBL3 Committee
2010-2012	Steering Committee for Objectives for Infectious Diseases/Global Health/Vaccines (ID-GH-V)
2011-present	Faculty Member MERIT Postdoctoral Training Program

# Professional Activities Outside UAB:

1985-1988	Member Bacteriology and Mycology Study Section, NIH
1985-l989	Section Editor for bacterial immunology, Journal of Immunology,
1984-1990	Editorial Advisory Board of The Journal of Molecular and Cellular Immunology
1985-1995	Member of the Editorial Board of Microbial Pathogenesis
1987	Nominating Committee, Division B of the American Society of Microbiologists,
1985-2013	Editorial Board of Microbial Pathogenesis
1988-l994	Editorial Board of Infection and Immunity,
1988 -present	Ad Hoc Reviewer for VA, NSF, and NIH BMI and BM2 study sections
1989-1991	Reviewer for USDA Competitive Grants, Molecular Biology Program
1990	NIH AIDS & Related Research Review Group,
1991	Reviewer for Howard Hughes fellowship grants
1991-1992	ASM Foundation for Microbiology Lecturer
1992	Reviewer of CBER Bacterial Vaccines Division
1992	Bacterial Vaccines Advisor to WHO and PAHO
1994-1995	President of the Southeastern Branch of the American Society of Microbiologists

1995-1999 Member MIDRC Study section, NIH. 1996-2000 Publications Committee American Association of Immunologists 1999 Chair Elect of ASM Division B, Microbial Pathogenesis 2000 - Present Fellow American Academy of Microbiology 2001-2002 Scientific Committee ISPPD-3 (Alaska) 2002-2008 Ad Hoc Member of NIH Diversity Predoctoral Fellowship Review 2003-2004 Organizing Committee ISPPD-4 (Finland) 2003-2017 **Editorial Board Infection and Immunity.** 2005-2006 Scientific Committee ISPPD-5 (Australia) St. Jude External Advisory Committee, Sickle Cell Disease Center 2006 2006-present Scientific Advisory Board PATH Vaccine Solutions (Gates Foundation-funded pneumococcal Vaccine development) Scientific Committee ISPPD6 (Iceland) 2007-2008 2008-2010 Scientific Committee ISPPD7 (Israel) Visiting Professor at SungKungKwan University and WCU Chairprofessor, National Research 2008-2013 Foundation of Korea. Adviser for Kyounggi-Provincial Research Center, South Korea 2008-2013 Huons Pharamceutical Co., South Korea 2008-2013 Advisor for Jung-San Bio-engineering Co. South Korea 2009-2013 2012-present International Editorial Board for Clinical Vaccine Research; Sponsored by Korean Vaccine Soc. 2012-2015 Vaccine's "Council of 100" 2013, 2015 Ad Hoc Member of NIH Balance and Hearing Fellowship Review Panel. American Association of Immunologists MEMBERSHIPS: American Society of Microbiologists American Society for Advancement of Science Infectious Diseases Society of America NIH, NIAID Individual Research Fellowship, 1973-1975 HONORS: NIAID Research and Career Development Award, (1982-1987) President of the Southeastern Branch of the American Society of Microbiologists, 1894-1995 P. R. Edwards Award 2004 (Southeastern Branch of ASM). Fellow, American Academy of Microbiology ~1998 - present Fellow, National Academy of Inventors 2013 - present PATENTS: 5,476,929, Structural Gene of Pneumococcal Protein, December 19, 1995 5,679,768, Epitopic Regions of Pneumococcal Surface Protein A, October 21, 1997 5,753,463, Structural Gene of Pneumococcal Protein, May 19, 1998 5,871,943, Immunoassay Comprising A Truncated Pneumococcal Surface Protein A (PspA), September 8, 1998 5,804,193, Truncated PspA Lacking a Functional Cell Membrane Anchor Region, September 19, 1998 5,856,170, Structural Gene of Pneumococcal Protein, January 5, 1999 8,710,840, Strain Selection of Pneumococcal Surface Proteins, September 21, 1999 5.980.908, Epitopic Regions of Pneumococcal Surface Protein A (PspA), November 9, 1999 6,004,802, Oral Immunization of Pneumococcal Antigens, December 21, 1999 6,042,838, Immunogenic Compositions for Mucosal Administration of Pneumococcal Surface Protein A, March 28, 2000 8,714,741, Pneumococcal Surface Proteins and Uses Thereof, December 31, 2002 7,078,042, Pneumococcal Surface Protein C (PspC) Epitopic Regions and Strain Selection Thereof, and Uses Therefor", July 18, 2006 This list is out of Date as of 2013. Additional patents have been awarded.

## **SYMPOSIUM/SEMINAR CHAIRMAN:** (Does not include Chairman of Abstract Presentations)

FASEB Conference, Session on the Evolution of Anti-Bacterial Antibody, 1983

Current Research on Bacterial Vaccines, ASM 1984.

Immune Response Humoral II, ASM, 1985.

Carbohydrate Antibodies Session of the First International Symposium on

Immunoglobulin in Subclass Deficiencies, Lund, Sweden, 1985.

Surface Antigens of Bacterial Pathogens, ASM, 1986.

Section head, Block K, Microbial Immunity and Parasitology., Amer. Assoc. of Immunol., 1989 Ann. Meeting.

Adhesins - Structural Considerations, International meeting of "Microbial Adhesion and Invasion, 1990

New Developments in Bacterial and Parasite Vaccines, ASM 1992

Bacterial Virulence Factors, ASM 1995

Immunology of Immune Responses, Session Organizer, ASM 1996

Chair Division B American Society of Microbiology 1998-1999

Session Chairman, SE ASM Meeting, 1999

Session Chairman, SE ASM Meeting, 2000

Session Chairman, SE ASM Meeting, 2001

Session Chairman, International Symposium on Pneumococci and Pneumococcal Disease Finland, 2004

Session Chairman, International Symposium on Pneumococci and Pneumococcal Disease Australia, 2006

Session Chairman, ASM, Boston, 2008.

Session Chairman, International Symposium on Pneumococci and Pneumococcal Disease, Iceland, 2008

Session Co-Chair, International Symposium on Pneumococci and Pneumococcal Disease, Israel, 2010

#### **INVITED SPEAKER (outside of UAB):**

"Importance of Specificity, Idiotype and Isotype in Antibody-Mediated Anti-Pneumococcal Protection", ASM Annual Meeting, 1982.

"Evolutionary Aspects of Antibodies to Pneumococcal Phosphocholine", FASEB Conference, 1983.

Gordon Conference Session on Evolution of Antibacterial Antibody, 1983

"Protective Antibodies to Noncapsular Pneumococcal Antigens", ASM Annual Meeting, 1986.

"Studies of PspA (Pneumococcal Surface Protein A) Insertionally Inactivated Mutants" (Presented by L.S. McDaniel), Second ASM Conference on Streptococcal Genetics, 1986.

"Growth and Killing of Salmonella typhimurium in Intracellular and Extracellular Compartments", ASM Annual Meeting, 1987.

"The role of pneumococcal surface protein A in the virulence of *Streptococcus pneumoniae*" Conference of Microbial Surfaces; Determinants of Virulence and Host Responsiveness, Oakland CA 1987.

"Pneumococcal surface protein A: Structural analysis and biological significance". (Presented by Janet Yother). Third ASM Conference on Streptococcal Genetics. 1990

"PspA, a protection eliciting protein of the pneumococcus". Buffalo Conference on Microbial Pathogenesis, Buffalo New York 1990

"Pneumococcal Surface Protein A: Role in Pathogenesis and Vaccine Development". Genetic Analysis of Bacterial Pathogenesis Session at the 1991 ASM Conference on Biotechnology, 1991..

"Lessons from animal studies of salmonella pathogenesis", NIH sexually transmitted disease conference, Hamilton, Montana, 1991.

"Pneumococcal surface protein A". WHO Scien. Meeting on New Pneumococcal Vaccines, Geneva, 1992.

"The potential for protein vaccines against *Streptococcus pneumoniae*, Session in New Developments in Bacterial and Parasite Vaccines, ASM, Annual Meeting 1992.

"Early Events in the Pathogenesis of Enteric Fever in Mice". NATO Salmonella Meeting, Sicily, 1992.

"Prevention and Control of Pneumococcal Infections". ICAAC Annual Meeting, 1993.

"Pneumococcal Proteins as Possible Alternative to a Polysaccharide-Protein Conjugate Vaccine". Annual ASM Meeting, 1994.

"The Future of Pneumococcal Vaccines", ICAAC Annual Meeting, 1994.

WHO/CDC Joint Workshop on Pneumococcal Vaccines, Winchester, England, 1994

WHO/CDC/NIAID/FDA Joint Workshop on Immunologic Assays for Pneumococcal Vaccines, Atlanta, 1994.

"Non-Capsular virulence factors of Streptococcus pneumoniae". ASM Division D Lecture 1995.

"Mouse Models for Passive Protection against *Streptococcus pneumoniae*", WHO/CDC Joint workshop on Pneumococcal Vaccines, Atlanta, 1996

"Pneumococcal Immunity", Department of Health & Human Services Antibody Workshop, Wash., DC, 1996

"Streptococcus pneumoniae: Molecular Biology and Mechanism of Disease" Workshop, Lisbon, Portugal, 1996

"PspA: Potential New Vaccine Candidate" Fourth Annual Work Group Meeting on Improving the Performance of Influenzae and Pneumococcal Vaccines in Adults, Institute for Advanced Studies in Immunology and Aging, Washington, DC, 1996.

"Non-Polysaccharide Approaches for Vaccination Against Streptococcus pneumoniae", Acute Respiratory Infections in Children: Prospects for Prevention, Annecy, France, 1996.

"Pneumococcal Vaccines", Molecular Pathogenesis of Infectious Diseases Conference sponsored by the European Science Foundation, Obernai, France, 1996.

"Elicitation of Immunity to Pneumococci with PspA and other Experimental non-Capsular Vaccines", ASM National meeting, 1997.

"Potential for Use of PspA as a Vaccine to Protect Against Pneumococcal Infection", National Sickle Cell Program, 1997.

- "Protein virulence factors of Streptococcus pneumoniae and their potential for use in vaccines to protect against colonization and infection with *S. pneumoniae*". U.S. Japan Acute Respiratory Disease Meeting, Houston, Texas, 1998.
- "Protein Vaccines & other New Approaches". Pneumococcal Vaccines for the World, 1998 Conference. WHO Conference. Washington, DC, 1998.
- "Elicitation of Protective Antibody to PspA in Man", WHO Pneumococcal and Hib Vaccine Development and Introduction Meeting, Geneva, Switzerland, 1999.
- "Role of Mucosal Immunization for Protection Against Acquisition and Invasion of Infections with *Streptococcus pneumoniae*", Congress of Mucosal Immunology, Amsterdam, 1999.
- "Away from pneumococcal conjugates?" Overview on Vaccine Research in WHO and UNAIDS, Montreux, France, 1999.
- "Immunization of the Elderly with Conserved Surface Proteins of *Pneumococcus*". International Symposium on Immunity in the Elderly, Annecy, France, 1999.
- "Protective mucosal & systemic immunity elicited by protein antigens of pneumococci", Immunology of Infectious Diseases Symposium, Bethesda, MD, 1999
- "Use of pneumococcal virulence proteins to formulate vaccines to protect against infection", SE ASM Meeting, 1999.
- "Non polysaccharide vaccines", Otitis Media: A Preventable Disease? Meeting, Annecy, France, 2000.
- "Virulence Factors of Streptococcus pneumoniae", ICAAC Meeting, Toronto, Canada, 2000
- "New Vaccines for non-serotype-dependent Protection Against Pneumococcal Disease", ISAAR Meeting, Seoul, Korea 2001
- "Protein Vaccines for Pneumococci", NIH of Korea, 2001
- "Protein Pneumococcal Vaccine for Children", Gates Foundation for Children's Vaccines 2001
- "Protection of the elderly from pneumococcal pneumonia with a protein based vaccine?" 2002 International Conference on Immunology and Aging, Washington D.C. 2002
- "Potential for Protein Vaccines to Protect the Elderly from Infections with *Streptococcus pneumoniae*." Immunobiology and Aging, Washington, D.C. 2002.
- "Protein Vaccines for Protection Against Pneumococci" ISPPD, Anchorage, Alaska, 2002.
- "Protein Vaccines for Protection Against Pneumococci" JCS, Kobe, Japan, 2002.
- "Subtle means by which the pneumococcus colonizes and invades" Conference Louis Pastur. Paris, 2002
- "Protein vaccines for pneumococcal disease", Pneumococcal Vaccine Workshop. Key Lago, FL 2003
- "Pneumococcal Proteins that may constitute the Next Generation Vaccine for Pneumococcal Disease", 5<sup>th</sup> International symposium on Tonsils and Mucosal Barriers of the Upper Airways, Wakayama, Japan, 2003
- "Pneumococcal Surface Protein Vaccine Candidates", 8<sup>th</sup> International Symposium on Recent Advances in Otitis Media, Ft. Lauderdale, FL, 2003.
- "Effects of PspA, NanA, and Antibodies to PspA on Virulence of *Streptococcus pneumoniae*" Pneumococcal Vaccine Workshop. Key Lago, FL 2004
- "Why Should we have a Protein Antigen", Pneumococcal Disease: vaccine Strategies, Washington, DC, 2003
- "Effects of PspA, NanA, and Antibodies to PspA on Virulence of *Streptococcus pneumoniae*" Pneumococcal Vaccine Workshop. Key Lago, FL 2005
- "Animal Models and Surrogate Assays for Testing Candidate Pneumococcal Vaccines", PATH, Washington DC 2005
- "Surface Proteins of Streptococcus pneumoniae: Their Roles in Virulence and Potential as Vaccines" 6th Pneumococcal Disease Society Meeting, Tokyo, Japan, 2005
- Invited participant (presentation by Roy C. Curtis III), Grand Challenges in Global Health Meeting, Gates Foundation, Seattle, WA, 2005
- "PspA Inhibibts the Antibacterial Effects of Apolactoferrin on Streptococcus pneumoniae. VII International Conference on Lactoferrin, Honolulu, Hawaii 2006
- "Pneumococcal Species-Specific Protein Vaccines: Prospects. International Symposium on Pneumococci and Pneumococcal Disease 5, Alice Springs, Australia 2006.
- "New Antigenic Targtets for Pneumococcal Vaccines", Symposium on Immunobiologicals and Human Health, Bio-Manguinhos, Rio De Janeiro, Brazil 2006
- "Surface Proteins of Streptococcus pneumoniae: Their Roles in Virulence and Potential as Vaccines". Euroconference on Infection and Lung Diseases, Institut Pasteur, Paris France 2006
- "Protein Vaccine against Pneumococci: A Path to the Future" ASM Foundation Speaker, American Society of Microbiology, Hawaii Branch, Annual Meeting 2006.

"Immunization with mixtures of pneumococcal virulence molecules can prevent pneumococcal disease in mice", Microbiology Scociety of Korea, Pyeong Chang, Korea, 2007

- "Protein Vaccines for Pneumococcal Disease, Pharmaceutical Society of Korea, Kwang-Joo, Korea, 2007
- "The interaction of Streptococcus pneumoniae, PspA, and lactoferrin", ASM foundation Speaker, American Society of Microbiology, Indiana Branch, Annual Meeting, 2007.
- "Pneumococcal protein vaccines", REBVAC Workshop, Siena, Italy 2007.
- "The Ying and Yang of Colonizaion and Infection With Streptococcus pneumoniae. ASM Annual Meeting, Boston 2008.
- "PspA plays a major role in the protection of penumococci from lactoferrin" International Symposium on Pneumococci and Pneumococcal Disease 6. Reykjavik, Iceland. 2008.
- "Effect of PspA and PspC on complement deposition and Immune Adherence", The Microbiology Society of Korea, 2009.
- "Animal Models to Evaluate Protein Vaccine Antigens". PATH/NIAD Pneumococcal Meeting, Washington DC, 2010.
- "Elicitation of Mucosal Immunity by Proteins of *Streptococcus pneumoniae*", Second Microbial Pathogenesis Immunity Symposium, Suwon, Korea 2010.
- "Selection of *Streptococcus pneumoniae* capsular types by the pneumococcal conjugate vaccine and by cystic fibrosis". 7th International symposium of tonsils and mucosal barreirs of upper airways, Asahikawa, Japan, 2010.
- "Elicitation of Immunity against colonization by antigens of *Streptococcus pneumoniae*". 7th International symposium of tonsils and mucosal barreirs of upper airways, Asahikawa, Japan. 2010.
- "Virulence mechanisms of a pneumococcal surface protein. WCU Symposium Suwon South Korea 2011.
- "Virulence mechanisms of Pneumococcal surface protein A (PspA), Korean Society of Microbioogy, DaeChun, South Korea. 2011
- Mechanism of Inactivation of Complement C3 by PspA. WCU Symposium Suwon South Korea 2012 PspA's inhibits classical pathway complement deposition on the pneumococcal surface by competing with surface binding of CRP (short talk), ISPPD8 Iguacu Falls, Brazil, 2012
- Streptococcus pneumoniae, Captian of the Men of Death, Chung-Ang University School of Pharmacy, Biomedical Sciences Symposium, Seoul, South Korea, 2012
- PspA's role in protection against complement. Microbiology Society of Korea, Seoul South Korea 2012

  A role for protein antigens in pneumococcal vaccines and the Expression of PspA families after a decade of conjugate vaccine use. In The 7<sup>th</sup> Ewha Vaccine Symposium, Seoul Korea. 2012
- "DogmaHidesBeauty", Infant Health Workshop, Key Largo FL, 2013
- "Non-Capsular Vaccines for *Streptococcus pneumoniae*", The Fifth Microbial Pathogenesis Symposium, Suwon, S. Korea 2013
- "Streptococcus pneumoniae non-capsular vaccines", Korean Society of Microbiology, Chuncheon Korea, 2013 "Non capsular vaccines for pneumococci" and "Animal models to evaluate protein vaccine antigens", Tsinghua University School of Medicine, Bjing China 2013
- "Non-capsular vaccine for Streptococcus pneumoniae". Liquidia, Research Triangle Park NC. July 2013. Putative Pneumococcal Proteins: their mechanisms of action, 7<sup>th</sup> Extraordinary International Symposium on Recent advances in Otitis Media, Stockholm, Sweden 2013
- Non-capsular vaccines for Streptococcus pneumoniae, why and how? Univ, Texas School of Public Health, Houston Texas. March, 2014.
- "Memorial For Patti Hall". Pneumo Symposium, Birmingham, Alabama, April 28, 2014
- "PspA a vaccine component". University of Tokyo, September 2014.
- "New Perspectives on Protein Vaccines with a focus on PspA". Butantan Instituto, Sao Paulo, Brazil April 2015
- "Potential and Problems with Protein Vaccines for Pneumococci" and "Surrogate Assays for Antibody to PspA: How and Why". Albany Medical College, Albany New York, May 2015.

### INVITED UNIVERSITY, FEDERAL LABORATORY, and CORPORATE LECTURES, since 1981

National Institutes of Health, 1981, 1983 University of Texas Health Science Center, Dallas, TX, 1983 Rush Medical Center, Chicago, IL, 1983 University of Missouri, Columbia, MO, 1984 Emory University, Atlanta, GA, 1985 Washington University, St. Louis, MO, 1985 Gothenberg, Sweden, 1985 University of Michigan, Ann Arbor, MI, 1986

Northwestern Medical School, Chicago, IL, 1986

State University of New York at Stoney Brook, 1987

University of Oklahoma, Oklahoma City, 1987

Rush Medical College, Chicago, IL, 1988.

Baylor College of Medicine, Houston, TX, 1989

Washington University, St. Louis, MO, 1989

Connaught Laboratories, Swiftwater PN, 1989

University of Texas Southwestern, Dallas, TX, 1989

University of Tennessee, Memphis, TN, 1990

State University of New York at Buffalo, 1990

Merck, Sharp and Dohme, Philadelphia, PA, 1990

Wake Forrest Univ. Med. Center, Winston-Salem NC, 1991

Case Western Reserve Univ, Cleveland, OH, 1991

Connaught Laboratories, Swiftwater PA, 1991

Medimune Inc., Fredrick, MD, 1991

CEBR (FDA), Bethesda MD, 1992

University of Oklahoma, Oklahoma City, OK, 1992

Medimmune, Inc., Fredrick, MD, 1992

Genentech, San Francisco, CA, 1992

Alabama State University, Montgomery, AL 1992

Washington University St. Louis, MO 1993

Centers for Disease Control, Atlanta, GA 1993

Centers for Disease Control, Atlanta, GA 1993

Uniformed Services Medical School, Bethesda, MD 1993

University of Iowa, Iowa City, Iowa, 1994

National Academy of Sciences, Institute of Medicine, Washington, DC 1994

University of Lund, Lund, Sweden, 1994.

Duke Medical School, Durham, NC, 1994

Fogerty Institute, Toxic Streptococcal Disease 1995

Fogerty Institute, Emerging Infections 1995

University of Helsinki, Finland 1995

University of Lund, Sweden 1995

University of Mississippi, Jackson, 1996

Medical School of Ohio, Toledo, Ohio, 1998

Auburn Univ. Auburn AL, 1998

University of Iowa, Iowa City, Iowa, 1998

Alabama State University, 1999

Eli Lilly Corporation, 1999

Vaccine Development for Elderly CDC 2000

Medical School, Reykjavik, Iceland, 2000

Northern Illinois, Univ. 2001

Vaccine Development, Aventis, Barcelona Spain 2001

Albany Medical College, Albany, NY, 2002

University of Texas Medical Center, Galveston, TX, 2002

University of Wakayama, Japan 2002

Syntonix, Boston, MA, 2002

Aventis, Toronto, Canada, 2002.

University of Texas SouthWestern, Dallas, 2003

University of Mississippi Medical Center, Jackson, MS., 2003

University of Cincinnati, Cincinnati, Ohio, 2003

University of Pennsylvania, Philadelphia, PN 2004

University of Tennessee at Memphis, 2004

University of Oklahoma, 2005

Sanofi Pasteur, Toronto, Canada 2005

Arizona State University, 2005

University of Texas at Brownsville, 2005

Intercell, Viena, Austria, 2006

Westmead Hospital, Sydney, Australia 2006

University of Melbourne, Australia 2006

University of Adelaide, Australia 2006

University of Queensland, Brisbane, Australia, 2006

Butantan Institute Sao Paulo, Brazil, 2006

Biodesign Institute Arizona State University 2006

International Vaccine Institute, Seoul, Korea, 2007

Korean National Institute of Health, Seoul, Korea, 2007

Ewha Medical Research Institute, Ewha University, Seoul, Korea, 2007

Sanofi Pasteur, Toronto, Canada, 2007

University of Minnesota Otitis Media Study Group 2007

University of Minnesota Pediatric Grand Rounds 2007

University of Texas Health Science Center, San Antonio, Seminar 2008.

Wake Forest University, 2009

Mississippi State, 2009

University of Texas Health Science Center, Brownsville, 2009.

University of Massachusetts Medical School, Worcester, MA, 2010.

University of Texas Health Science Center, Brownsville, 2010.

Chungnam National University, Daejeon South Korea. 2010.

Catholic University, Daegu, Korea. 2010.

International Vaccine Institute. Seoul, Korea. 2010

Instituto Butantan, Sao Paulo, Brazil 2010

University of Minnesota School of Medicine, Minneapolis, MN 2010

Alabama State University, 2011

Korean KFDA 2011

ChonnamNationalUniversity, Seoul ,South Korea 2011

Instuito Butantan, Sao Paulo, Brazil 2012

CanSino Vaccines, TinJin, China 2012

Seoul National University School of Dentistry, Seoul South Korea, 2012

Samsung Medical Center, Division of Infectious Diseases, Seoul South Korea, 2013

Cell Trion Inc. Incheon S. Korea 2013

Samsung Medical Center, Presentation to Medical Students & Graduate Students, Seoul S. Korea, 2013

Tsinghua University School of Medicine, Center for Infectious Diseases Research, Beijing, China, 2013

Liquidia, Incorporated, Research Triangle Park NC, 2013

School of Public Health, Houston, Texas 2014

University of Tokyo 2014

Instutito Butantan, Sao Paulo Brazil 2015

Albany Medical College, Albany New York, 2015

# <u>TEACHING EXPERIENCE -- COURSES TAUGHT (not including individual lectures in other courses) (All courses at UAB unless otherwise indicated):</u>

Immunology for Undergraduates at Southern Illinois University, Edwardsville, 1977

Graduate Immunogenetics, Co-director, 1979, 1985

Director of Immunology Journal Club, 1979-1985

Coordinator for Laboratory Rotations 1980-1984

Graduate Statistics for Microbiology and Immunology, Director, 1987

Laboratory Rotation Course for CMB students, Director, 1990-1993.

Graduate Course in Bacterial Pathogenesis, Director, 1992

Graduate Course in Bacterial Pathogenesis, Director, 1996

Graduate Course in Bacterial Pathogenesis, Director, 1998

Graduate Course in Bacterial Pathogenesis, Director, 2000

Bacteriology Section, MS II Microbiology, Director, 2000

Bacteriology Section, MS II Microbiology, Director, 2001

Bacteriology Section, MS II Microbiology, Director, 2002

Bacteriology Section, MS II Microbiology, Director, 2003

Graduate Course in Bacterial Pathogenesis, Director, 2003

Bacteriology Section, MS II Microbiology, Director, 2004

Bacteriology Section, MS II, Microbiology, Director, 2005

Graduate Course in Bacterial Pathogenesis, Director, 2005

Graduate Course in Bacterial Pathogenesis, Director, 2006

Bacteriology Section, MS II, Microbiology, Director, 2006

Brief Graduate Course in Bacterial Pathogenesis, Butantan Instituto, Sao Paulo, Brazil 2006

Graduate Course in Bacterial Pathogenesis, Director, 2007

Bacteriology Section, MS II, Microbiology, Director, 2007

Graduate Course in Bacterial Pathogenesis, Director, 2008

Graduate Course in Bacterial Pathogenesis, Director, 2009

Advanced Graduate Course in Bacterial Pathogenesis, Director, 2009

Graduate Bacterial Pathogenesis, Sung Kyung Kwan University, Suwon, Korea 2009

Graduate Course in Bacterial Pathogenesis, Director 2010

Advanced Graduate Course in Bacterial Pathogenesis (UAB), 2010

Advanced Graduate Course in Gram Positive Bacteria, SKKU, Korea, 2010

Bacterial Pathogenesis Course, Butantan Instituto, Sao Paulo 2010

Graduate Bacterial Pathogenesis, SKKU, Suwon, Korea, 2010

Graduate Course in Bacterial Pathogenesis (UAB), Director 2011

Graduate Bacterial Pathogenesis, SKKU, Suwon, Korea, 2011

Advanced Course in Pulmonary Disease, Lecture on Pneumococci (UAB) 2011

Graduate Course in Bacterial Pathogenesis (UAB), Director 2012

Graduate Bacterial Pathogenesis, SKKU, Suwon, Korea, 2012

Advanced Course in Pulmonary Disease, Lecture on Pneumococci (UAB) 2012

Graduate Course in Bacterial Pathogenesis (UAB), Director 2013

Graduate Bacterial Pathogenesis, SKKU, Suwon, Korea, 2013

Advanced Course in Pulmonary Disease, Lecture on Pneumococci (UAB) 2013

Graduate Course in Bacterial Pathogenesis (UAB), Director 2014

Advanced Course in Pulmonary Disease, Lecture on Pneumococci (UAB) 2014

Graduate Course in Bacterial Pathogenesis (UAB), Director 2015

# **CURRENT ANNUAL TEACHING RESPONSIBILITIES:**

6 hours of Microbial Pathogenesis in the Graduate Immunology Course

2 hours of Microbial pathogenesis in Fundamentals Dental/Optometry Microbiology

2 hours of Lecture Medical Fundamentals II.

### MEDICAL AND DENTAL COURSE LECTURES FROM 1995 TO PRESENT:

Genetics of Host Parasite Interaction, CMB V, 2 hr, 1992

Enterics I and II Lecture, Dental Students, 1992

Enterics I and II Lecture, Dental Students, 1993

Genetics of Host Parasite Interaction, CMB V, 2 hr, 1993

Bacterial Enteric Lectures, Medical Students, 2 hr, 1993

Genetics of Host Parasite Interaction, Cellular and Molecular Biology V, 2 hr, 1994

Enterics I and II Lecture, Dental Students, 1994

Immunity to Infection, Including Aids, Vaccines, Medical Microbiology, 1 hr, 1994

Immune Response Genes, Immunogenetics, 2hr, 1995

Genetic Control of Infection, Medical Microbiology, 2hr, 1995

Microbial Pathogenesis, Cellular and Molecular Biology V (Immunology) 2hr, 1995

Immunogenetics, Dental Students, 2 hr., 1995

Microbial Pathogenesis, Dental Students, 2 hr, 1997

Molecular Epidemiology Course lecture, 1 hr, 1997

Microbial Pathogenesis, Dental Students, 1 hr, 1998

Microbial Pathogenesis, Cellular and Molecular Biology V (Immunology) 2hr, 1998

Animal Resource Program Lecture, 2 hr., 1998

Microbial Pathogenesis, Cellular and Molecular Biology V (Immunology), 2 hr, 1999

School of Public Health Lecture, 2 hr, 1999

Animal Resource Program Lecture, 2 hr, 1999

Microbial Pathogenesis, Cellular and Molecular Biology V (Immunology), 2 hr, 2000

Immunogenetics, Dental Students, 2 hour, 2000

Emerging Infectious Diseases Lecture, 2 hours, 2001

Microbial Pathogenesis, Cellular and Molecular Biology V (Immunology), 2 hr, 2001

Microbial Pathogenesis, Dental Students, 2 hr, 2002

Medical Microbiology, Bacteriology, Medical Students, 2 hours, 2002

Microbial Pathogenesis, Cellular and Molecular Biology V (Immunology), 2 hr, 2002

Microbial Pathogenesis, Dental Students, 2 hr, 2003

Medical Microbiology, Bacteriology, Medical Students, 2 hours, 2003

Medical Microbiology, Bacteriology, Medical Students, 2 hours, 2004

Microbial Pathogenesis, Dental Students, 2 hours, 2004

Medical Microbiology, Bacteriology, Medical Students, 2 hours, 2005

Microbial Pathogenesis, Dental Students, 2 hours, 2005

Microbial Pathogenesis, Cellular and Molecular Biology V (Immunology), course master 2003-2006

Medical Microbiology, Bacteriology, Medical Students, 2 hours, 2006

Microbial Pathogenesis, Dental Students, 2 hours, 2006

Microbial Pathogenesis, Dental Students, 1 hours, 2007

Medical Microbiology, Bacteriology, Medical Students, 2 hours, 2007

Medical Fundamentals II, Infectious Diseases 2 hours 2007.

Microbial Pathogenesis, Dental Students, 2 hours, 2008

Medical Fundamentals II, Infectious Diseases 2 hours 2008.

Microbial Pathogenesis, Dental Students, 1 hours, 2009

Medical Fundamentals II, Infectious Diseases 2 hours 2009.

Graduate Immunology, Microbial Pathogenesis, 2 hours, 2009

Medical Fundamentals II, Intro to Infect. Dis, 1 hour, 2010

Medical Fundamentals II, Microbial Pathogenesis, 1 hr, 2010

Dental Fundamentals I, Bacterial Pathogenesis, 2 hr, 2010

Medical Fundamentals II, Intro to Infect. Dis, 1 hour, 2011

Medical Fundamentals II, Microbial Pathogenesis, 1 hr, 2011

Dental Fundamentals I, Bacterial Pathogenesis, 2 hr, 2011

Medical Fundamentals II, Intro to Infect. Dis, 1 hour, 2012

Medical Fundamentals II, Microbial Pathogenesis, 1 hr, 2012

Dental Fundamentals I, Bacterial Pathogenesis, 2 hr, 2012

UAB Medical Student Pre-Matriculation Program 2 hr, 2012

Dental Fundamentals I Microbial Pathogensis, 2 hr, 2013

Medical Fundamentals II, Intro to Infect. Dis, 1 hour, 2013

Medical Fundamentals II, Microbial Pathogenesis, 1 hr, 2013

Medical Fundamentals II, Microbial Pathogenesis, 1 hr, 2014

Dental Fundamentals II, Microbial Pathogenesis, 1 hr, 2014

Medical Fundamentals II, Microbial Pathogenesis, 1 hr 2015

Dental Fundamentals II, Microbial Pathogenesis, 1 hr 2015

#### **INVITED SPEAKER, UAB, since 1993.**

"A Potential Protein Vaccine to Protect Against Pneumococcal Infection in Children", Infectious Disease Seminar, May, 1993.

"A Marker for Death", Pulmonary Research Forum, March, 1993.

"Mucosal Immunity and Pneumonia", Pulmonary Research Forum, May 1995.

Infectious Disease Conference Speaker, 1996

Immunology Seminar Speaker, 1996

Pulmonary Research Forum Speaker, 1997

Immunology Seminar Speaker, 1997

Animal Resource Program Seminar Series Speaker, 1997

Aging Center Seminar Series Speaker, 1997

Microbiology Retreat, Featured Speaker, 1997

Gene Therapy Seminar Series, 1997

Immunology Seminar Speaker, 1998

Cancer Center Retreat, 1999

Immunology Seminar Speaker, 1999

Biology of Aging Retreat, 1999

Immunology Seminar Speaker, 2000

Microbiology Departmental Seminar 2002

Sparkman Center, 2002

Mucosal Immunology Seminar Speaker, 2003

Immunology Seminar Speaker, 2003

Mucosal Immunology Seminar Speaker, 2004

Immunology Seminar Speaker, 2004

Mucosal Immunology Seminar Speaker, 2005

Immunology Seminar Speaker, 2005

Mucosal Immunology Seminar Speaker, 2006

Immunology Seminar Speaker, 2006

Immunology Seminar Speaker, 2007

Microbiology Seminar Speaker, 2008

Program In Immunology Series, 2010

Microbiology Retreat Speaker, San Destin, FL 2012

Microbiology Faculty Research Retreat 2015

#### Recent Findings Put in the Public Domain.

pUAB201 (expression plasmid for expression of alpha helical domain of pneumococcal surface protein A (PspA) of strain D39 (Family 1)) EESPVASQSKAEKDYDAAKKDAKNAKKAVEDAQKALDDAKAAQKKYDEDQKKTEE KAALEKAASEEMDKAVAAVQQAYLAYQQATDKAAKDAADKMIDEAKKREEEAKTKFNTVRAMVVPEPEQLAETKKKSEEAKQ KAPELTKKLEEAKAKLEEAEKKATEAKQKVDAEEVAPQAKIAELENQVHRLEQELKEIDESESEDYAKEGFRAPLQSKLDAKK AKLSKLEELSDKIDELDAEIAKLEDQLKAAEENNNVEDYFKEGLEKTIAAKKAELEKTEADLKKAVNEPEKPAPAPETPAPE -- the identical amino acid sequence as UAB055

pUAB202 (expression plasmid for expression of alpha helical domain of pneumococcal surface protein A (PspA) of strain V24 (Family 2)): EESPVASQSKAEKDYDAAVKKSEAAKKHYEEAKKKAEDAQKKYDEDQKKTEAKA EKERKASEKIAEATKEVQQAYLAYLQASNESQRKEADKKIKEATQRKDEAEAAFATIRTTIVVPEPSELAETKKKAEEAKAEEK VAKRKYDYATLKLALAKKEVEAKELEIEKLQYEISTLEQEVATAQHQVDNLKKLLAGADPDDGTEVIEAKLKKGEAELNAKQAE LAKKQTELEKLLDSLDPEGKTQDELDKEAEEAELDKKADELQNKVADLEKEISNLEILLGGADPEDDTAALQNKLAAKKAELAK KQTELEKLLDSLDPEGKTQDELDKEAEEAELDKKADELQNKVADLEKEISNLEILLGGADSEDDTAALQNKLATKKAELEKTQK ELDAALNELGPDGDEEETPP -- the identical amino acid sequence as UAB099

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#### LETTER to the EDITOR

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