

Texas State VITA

I. ACADEMIC/PROFESSIONAL BACKGROUND

**NAME: ROBERT J.C. McLEAN**

**TITLE** Professor

**EDUCATION**

<b>Degree</b>	<b>Year</b>	<b>University</b>	<b>Major</b>	<b>Thesis/Dissertation</b>
B.Sc.	1978	Guelph	Microbiology	Control of Coliforms in Ice Cream Food Colour
Ph.D.	1986	Calgary	Microbiology	The Role of Ureolytic Bacteria in Infectious Urinary Stone Production

**EXPERIENCE**

<b>University</b>	<b>Position</b>	<b>Dates</b>
University of Guelph, Canada	Postdoctoral Fellow	1986 – 1988
Queen's University, Canada	Assistant Professor	1988 – 1993
Queen's University, Canada	Adjunct Professor	1993 – 1994
Southwest Texas State University (now Texas State University-San Marcos)	Assistant Professor	1993 – 1998
Texas State University-San Marcos	Associate Professor	1998 – 2004
Texas State University-San Marcos	Professor	2004 – present
Texas A&M University	Visiting Scholar	Fall 2000
Midwestern State University	Adjunct Graduate Faculty	2002 – 2003
University of Texas	Visiting Scholar	Spring 2008

**TEACHING HONORS AND AWARDS**

**1996 - 1997:** Citation: Educator stimulating student interest in medical career, University of Texas Medical Center, Houston, TX

**2002:** Biographee: Who's Who Among America's Teachers, 7<sup>th</sup> Edition, Educational Communications, Inc., Lake Forest IL

**2002:** Favorite Professor, Alpha Chi Honors Society, Southwest Texas State University

**2005:** Biographee: Who's Who Among America's Teachers, 9<sup>th</sup> Edition, Educational Communications, Inc., Lake Forest IL

**2006:** Biographee: Who's Who in American Education, 7<sup>th</sup> Edition, Marquis Publishing, New Providence NJ

**2007:** Biographee: Who's Who in American Education, 8<sup>th</sup> Edition, Marquis Publishing

**COURSES TAUGHT**

<b>University</b>	<b>Course Taught (Number)</b>	<b>Dates</b>
University of Lethbridge, Lethbridge, AB, Canada	Microbiology (guest lecturer)	1984-1985
University of Guelph, Guelph, ON, Canada	Microbial Ecology (65-320)	1987
Queen's University, Kingston, ON, Canada	Introductory Microbiology (Micr 120)	1988-1993
	Graduate Bacteriology (Micr 930/931)	1988-1993
	Microbial Diversity (Micr 433)	1993
Texas State University	Microbiology (Bio 3440)	1993-1999
	Pathogenic Fungi (Bio 4440/5440)	1995-1996
	Pathogenic Microbiology (Bio 4445/5445)	1994-present
	Microbiology Seminar (Bio 5110M)	1996, 2001-6
	Topics in Physiology (Bio 5350)	1997
	Topics in Biology (Bio 4350/5350)	2006
	Microbial Ecology (Bio 4446/5446)	1997-2004
	Microbial Physiology/Genetics (Bio4447)	2007-present
	Microbiology (Bio 2400)	2000-present

**COURSES PREPARED (Southwest Texas State University/Texas State University)**

<b>Course</b>	<b>Details of Preparation</b>	<b>Dates</b>
Microbiology (Bio 3440, now 2400)	updated 20 yr. old laboratory and course published course notes with McGraw-Hill Assigned royalties to Texas State microbiology scholarships	1993-present 1996, 1999
Pathogenic Microbiology (Bio 4445/5445)	updated 20 yr. old laboratory and course published course notes with bookstore assigned royalties to Texas State microbiology scholarships	1994-present 1997-present
Microbial Ecology (Bio 4446/5446)	developed new course introduced research training as major component of course	1995-1997
Topics in Physiology (Bio 5350)	developed and taught course in microbial physiology and genetics	1997, 2006
Microbial Physiology and Genetics (Bio 4447/7447)	developed senior/graduate course in microbial physiology and genetics	2007-present

**STUDENTS AND THESES SUPERVISED (\*R.J.C. McLean - major professor; otherwise major professor listed in parentheses)**

(students listed where R.J.C. McLean played an active, major role in thesis research)

University	Student Name - Degree	Thesis Title	Year
Queen's	*A.J. Dumanski M.Sc.	Isolation and Characterization of the Capsule of <i>Proteus mirabilis</i> and its Role in Kidney Stone Formation	1992
Queen's (D Beauchemin)	A.T. Persaud M.Sc.	Development of Inductively-Coupled Plasma-Mass Spectrometry for Soil Analysis	1994
Queen's (M. Sayer)	P.J. Vincent M.Sc. (Eng.)	Silver-platinum Multilayer Thin Films as Antimicrobial Coatings for Catheters	1995
TX State	*M.K. Koenig M.S.	Parameters Affecting the Conformation of N-acetylneuraminic acid, <i>Escherichia coli</i> K1 Capsular Polysaccharide	1996
TX State	*M. Whiteley M.S.	Effects of Nutrient Limitation and Species Composition on Biofilm Development and Susceptibility to Iodine Disinfection	1997
University of Texas (G. Georgiou)	A. Razatos Ph.D.	Factors and forces involved in the initial events of bacterial adhesion as monitored by atomic force microscopy.	1999
University of Texas (B. Kirkland)	M Rahnis Ph.D.	Nannobacteria and mineral formation (student withdrew from program)	1997 - 1998
Queen's (WT Yen)	P.T. Khu M.Sc. (Eng.)	Bacterial Precious Metal Recovery	1998
TX State	*J.L. Adams M.S.	Role of <i>rpoS</i> in the Formation and Physiology of <i>Escherichia coli</i> Biofilms	1998
TX State	*H.C. Knowles M.S.	The Isolation, Culturing and Characterization of Nannobacteria	1998
TX State	*S. Prabhakaran M.S.	Investigation of Bacterial Fragmentation as a Possible Origin of Nanobacteria	1999
TX State	*G.J. Balzer M.S.	Effect of <i>relA</i> and <i>spoT</i> Deletions on <i>Escherichia coli</i> Biofilm Formation	2000
TX State	*M.K. Windham M.S.	Acyl Homoserine Lactone Recruitment of Bacteria into Biofilms.	2001

TX State	*K.L. Fuson M.S.	Biofilm-induced Gene Expression in Chemostat Grown <i>Escherichia coli</i> as Determined by a Gene Array	2002
Midwestern State Univ. (P. Hathorn)	R. Sink M.S.	Microbial Diversity in Desert Springs	2003
TX State	*C.L. Bates M.S.	Differential gene expression and colanic acid gene effects on biofilm formation	2004
TX State	*M. Merchant M.S.	Identification and Characterization of Bacterial Isolates from Spring Lake, Texas	2005
TX State	*A.K. Welsh M.S.	Detection of an Introduced Bacterial Culture in Greywater Treatment Reactors	2005
TX State	*W. Boswell M.S.	Effects of N-Acyl-L- Homoserine Lactone Lactonase on Disruption of Preformed Biofilms, Bacterial Recruitment, and Prevention of Biofilms	2007
TX State	*M. Weber M.S.	Role of <i>yjfO</i> , <i>agaB</i> and <i>atoS</i> in <i>Escherichia coli</i> Biofilm Formation and Stress Response	2007
TX State	*M. Jiminez M.S.	Chemotaxis response to cell signals (student withdrew)	2007-2008
TX State	*S. Nath M.S. (in progress)	Virus protection by biofilms	2007-present
TX State	*A. Taylor MS (in progress)	Mixed culture mutagenesis	2009-present

#### Masters - Non Thesis

TX State	*P.A. White - M.S. (withdrew)	1994 - 1997
TX State	*T.M. Schoeneweis - M.S. (completed)	1996
TX State	*L.A. Harper - M.S. (completed)	1998
TX State	*L.J. Smith - M.S. (completed)	1999
TX State	*J.E. Jankowski - M.S. (completed)	2000
TX State	*M. Arias-Cantu - M.S. (completed)	2000
TX State	*P. Afshar - M.S. (completed)	2006
TX State	*S. Larroca – M.S. (in progress)	2008 – present

#### Undergraduate Honors Theses

Queen's	*P.T. Khu B.Sc. (Eng)	Bacterial Enhancement of Gold Recovery	1992
TX State	*M.E. Delgado B.S. (Hon)	Precautions in Dentistry Against HIV Spread	1994
TX State	K.A. Dunn B.S. (Hon)	Role of Bacterial Biofilms in Leaf Fossilization	1995

TX State	*E.J. Hughes B.S. (Hon)	Efficiency of Latex Gloves as Barriers to Bacterial and Viral Pathogens	1996
TX State	*H.L. Bates B.S. (Hon)	Bacterial Biofilm-Associated Infection in Indwelling Medical Devices	1996
TX State	*A. Primmer B.S. (Hon)	Using Transposon Mutagenesis to Analyze Antibiotic Resistance in <i>Pseudomonas aeruginosa</i> Biofilms	1999
Texas State	*V. Pearson B.S. (Hon)	The Viral Cure: Bacteriophage as a Treatment Against Biofilm Infection	2004

**Independent Study (graduate level)**

TX State	*T.M. Schoeneweis M.S.	Role of biofilms as reservoirs for coliform populations in streams	1996
TX State	L.K. Marengo M.S.	In vitro culture and preparation of antigen for serodiagnosis of <i>Ehrlichia chaffeensis</i> infection.	1997
TX State	*L.A. Harper M.S.	Leaf decomposition by Edward's Aquifer fungi	1998
TX State	*J. Padgett	Microbial resistance to sodium azide	1998
TX State	*G Balzer	Use of <i>gfp</i> to mark biofilm populations	1998
TX State	*L.J. Smith	Undergraduate Microbiology Lab Manual	1999
TX State	*S Prabhakaran	Nanobacteria in kidney stones	1999
TX State	*J.E. Jankowski	The effects of ultraviolet radiation on cryptobiotic soil crusts	1999
TX State	*M. Arias-Cantu	Technique for identifying naturally occurring quorum-sensing signal antagonists	2000
TX State	*G. Southard	Generation of antibiotic sensitive mutants in <i>Pseudomonas aeruginosa</i>	2000
TX State	*B.D. Corbin	Growth of T4 phage in <i>E. coli</i> biofilms	2000
TX State	*K.L. Fuson	RNA purification from <i>E. coli</i> biofilms	2002

**Independent Study (undergraduate level) Texas State unless otherwise indicated**

Queen's	*A.J. Dumanski	Media for the characterization and isolation of <i>Proteus mirabilis</i> capsule	1990
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Queen's	*P.T. Khu	Use of <i>Bacillus subtilis</i> cell walls to selectively bind copper from sea water	1990
Queen's	*L.E. Bickerton	Use of <i>Bacillus subtilis</i> cell walls for copper removal from sea water	1991
Queen's	*A.M. Campbell	Repeated use of <i>Bacillus subtilis</i> cell walls to immobilize copper ions	1992
*D. McCarty	Colonization behaviour of urinary and gastrointestinal <i>Escherichia coli</i> isolates		1994
*R. Routh	Production of acapsular mutants of <i>Proteus mirabilis</i>		1994
*P.A. White	Influence of metal ions on bacterial capsule structure		1994
*D. Andrewartha	Isolation of biofilm forming bacteria from the Edwards Aquifer		1995
*E. Brown	Stationary phase genes and <i>Escherichia coli</i> biofilms		1996
*H. Larson	Diversity of acyl homoserine lactone, quorum signalling molecules in mixed population biofilms		1997 – 1998
*M. Garner	Screening compounds for their ability to inhibit biofilms		1999 - 2000
*A. Roth	Acyl homoserine lactone recruitment of bacteria into biofilms		2000
*A. Czermerys	Mutagenesis of a cryptic gene downregulated in <i>E. coli</i> biofilms		2002
*C. Potts	Quorum sensing in <i>Nitrosomonas</i>		2003
*M. Leal	Endolithic biofilms in Italian travertine		2003
*T. Sanger	Endolithic biofilms in Italian travertine		2003
*S Bryant	Microgravity enrichment of planktonic and biofilm bacteria from aquatic environments		2004-5
*O Gamez	Biofilm community structure and its impact on leaf fossilization		2004
*A Mamidi	Characterization of a bacterial quorum sensing inhibitor from an aquifer microorganism		2005
*P Zenker	Influence of cryptic gene, <i>yjfO</i> , deletion on <i>E. coli</i> biofilms		2005
*M Gomez	Quorum signal inhibiting bacteria in Big Bend National Park		2006
*V Huerta	Influence of teas on bacterial quorum signaling and biofilms		2006-7

*A Khamis	Quorum signal inhibiting plants in Austin	2007
*A Zayed	Quorum signal inhibiting plant identification	2007
*M Banning	Use of resazurin dye as a biofilm indicator	2007-8
*L Wiggins	Phenotype characterization of <i>nanK</i> mutant biofilms	2007-8
*H Keel	Quorum signal inhibition research (literature review)	2007
*K Mallet	Evaluation of synthesized quorum signal inhibitors	2007
*G Ortiz	Biom mineralization by <i>Pseudomonas aeruginosa</i> vesicles	2008

**Other Student Supervisory Committees: (TX State unless noted otherwise)**

<b>Student</b>	<b>Major Professor</b>	<b>Degree</b>	<b>Years</b>
K. McFarlane	G.M. Aron	M.S.	1993 – 1994
J. Leuzinger	G.M. Aron	M.S.	1993 – 1995
K. Quinonez	T. Arsuffi	B.S.	1994
D. Zamora	D. Garcia	M.S.	1994 – 1997
L. Nunn	F. Horne	M.S.	1995
J. Kemp	J. Baccus	M.S.	1995
H.Y. Li	R.B. Walter	M.S.	1995 – 1996
E.A. Weaver	G.M. Aron	M.S.	1995 – 1997
H.M. Sung	R.B. Walter	M.S.	1997
J. Rappe	D.W. Tuff	M.S.	1997 – 1998
D. Murphy	G.M. Aron	M.S.	1997 – 1998
K. Lord	R.B. Walter	M.S.	1998
G. Southard	G.M. Aron	M.S.	2000
J.N. Needham	D.M. Garcia	M.S.	2001
T. Allemand	A. Groeger	M.S.	2001
P.A. White	J.R. Koke	M.S.	2001
B. Scott	G.M. Aron	M.S.	2003
G. Lobban	M.R.J. Forstner	M.S.	2003
J. Meador	D.L. Mitchell (UT Houston)	Ph.D.	2003 – 2004
S. Craig	S.M. Payne (U Texas)	Ph.D.	2005 – 2008
M.A. Wallace	A. Groeger	Ph.D.	2006 – present
S. Schwarloze	G.M. Aron	M.S.	2006
A.K. Welsh	D Hahn	Ph.D.	2007 – present
B Mirza	D Hahn	Ph.D.	2007 – present
L Vega	PJJ Alvarez (Rice)	PhD.	2007 – present
M Kay	GM Aron	MS	2008 – present
T Erwin	GM Aron	MS	2008 – present

**ORGANIZATIONS**

**PROFESSIONAL:**

<b>American Society for Microbiology (ASM)</b>	1983 – present
- nominated for <b>alternate councillor</b> , Division J (Morphology and Structure) - election unsuccessful	1994
- <b>President-elect</b> , Texas Branch ASM	2001 – 2003
- <b>President</b> , Texas Branch ASM	2003 – 2005

- <b>Secretary</b> , Texas Branch ASM	2005 – 2007
- <b>Region VI Councilor</b> (ASM Branches in TX, NM, CO, WY, OK, KS, and NE)	2007 – 2009
- <b>International Committee</b> , Member	2008 – 2010
<b>Canadian Society of Microbiologists (CSM)</b>	1985 – 1996
- <b>CSM Council</b>	1992 – 1996
- <b>Vice Chairman</b> , Morphology and Structure Section	1992 – 1994
- <b>Chairman</b> , Morphology and Structure Section	1994 – 1996
<b>Microscopical Society of Canada</b>	1984 – 1995
<b>Sigma Xi</b>	1999 – present
<b>International Society for Microbial Ecology</b>	2000 – 2006
<b>SERVICE</b>	
UNIVERSITY:	
<b>Operations Board</b> , TX State Institute for Environmental and Industrial Science (IEIS)	1995 – 2000
- in conjunction with M. Tangum, wrote advertisement for Managing Director (which ultimately resulted in hiring of Dr. J. Koo)	1995 - 1996
- in conjunction with P. Cassidy, J. Koo, R. Walter, P. Barnes, J. Fitch, W. Rudzinski, and R. Larson, wrote \$2M proposal for IEIS seed money to EPA - also involved brief meeting with Sen. P. Gramm in summer 1996 at request of President Supple – received \$1.4M in FY 1997, senate approval of \$1.2M in FY 1998	1996 - 1998
- proposed IEIS seminar series to promote interdisciplinary research and interactions among members of TX State community - gave inaugural seminar at TX State Hill House in May 1997	1996 - 1997
<b>Presidential Fellow</b> , Appointed by President J.H. Supple	2001 - 2003
- member of President's Cabinet	
- met with all TX State Deans and Chairs, act as resource person for promoting scholarship	
- appointed as observer on TX State strategic planning committee by President D.M. Trauth	
- ad hoc member of Sponsored Projects and Undergraduate Research Advisory committees	
<b>Committee of Inquiry</b>	2002
- appointed by Associate VP for Research to investigate incidence of academic misconduct, per UPPS 5.03	
<b>Research Planning Committee</b>	2003
- appointed as co-chair (along with B. Covington) by President D.M. Trauth	
- develop University research policy recommendations for Provost and President's cabinet	
<b>Nomination Committees for Presidential Awards</b>	
- Scholarly/Creative Activity	2001-2003, 2005-7
- Service	2003-2005
- Presidential Lecture (chaired committee in 2007)	2005-2007

**Institutional Biosafety Committee**

- appointed as chair
- committee will develop university policy for dealing with biosafety issues 2008

## COLLEGE OF SCIENCE:

- Homecoming Committee** 1996
- College Review Group** 2005-2007
- Biology representative on College of Science tenure and promotion committee
- College Promotion and Tenure Task Force** 2007-2008
- rewrite College promotion and tenure document

## DEPARTMENTAL:

- Safety Committee** 1993 – 1994, 1998
- Curriculum Committee** 1994 - 1995
- Schultze Award Committee** 1994 - 1996
- Graduate Committee** 1995 - 1998
- Faculty Search Committees:** Marine Biologist, 1996 - present
- Freshman Biology Coordinator, Microbial Ecologist, Groundwater Hydrologist
- Long term Planning Committee** 2002
- Budget Committee** (Committee chair Spring 2001, 2007-9) 2001 - present
- Personnel Committee** (Committee chair 2006-9) 1998 - present
- CEC Scholarship Committee** (Committee and overall CEC chair 2002) 2000 - 2002
- Departmental Senate Liason** 2007 - 2008

## COMMUNITY:

- Canadian Society of Microbiologists / Society for Industrial Microbiology** 1994
- organized and chaired half day symposium on Biofilms at Annual Meeting in Toronto
- Canadian Society of Microbiologists** 1995
- organized and chaired day-long symposium on Microbiology of Nuclear Waste Disposal at Annual Meeting in Kingston, ON, Canada - arranged for and edited a special edition of the *Canadian Journal of Microbiology* (April 1996) with symposium review articles
- Scanning Microscopy International** 1995
- organized and chaired day-long symposium on Biomedical Device Infections at annual meeting in Houston, Texas - edited published presentations in *Cells and Materials*
- BioSci - Internet Discussion Group on Biofilms** 1997 - 1999
- co-moderator with C. Sternberg (Denmark), and R.J. Palmer (University of Tennessee)
- International Congress on Microbial Ecology** 1998
- organized, chaired and participated in half-day symposium on Microbial Biofilms at the 8th triennial International Symposium on Microbial Ecology held in Halifax, NS, Canada; edited submitted manuscripts by participants for publication in conference proceedings
- American Society for Microbiology**
- co-chair and speaker in Cell-Cell Signaling in Bacterial Biofilms symposium, Chicago 1999
- Invited speaker on biofilms at Texas Branch Spring and Fall meetings 1999
- Round table discussion group leader for two sessions at Biofilm 2000 Meeting in Big Sky, MT
- Invited Workshop Participant, Biofilms 2003 meeting, Victoria BC Canada 2003
- Invited Speaker, Mixed Infections Conference, Lake Tahoe, NV 2003

Invited Speaker on Graduate Education, Texas Branch Fall Meeting, Houston	2004
Texas Branch ASM President	2004-6
Invited Speaker on Biofilms and Discussion Host, Texas Branch Fall Meeting	2005
Invited Speaker on Microbiology Academic Careers, National Meeting Orlando	2006
Texas Branch ASM Secretary	2006-2008
Region 6 Councillor (ASM branches in CO, KS, NE, NM, OK, TX, WY)	2008-2010
International Committee	2008-2010

### **Editorial Board**

Bioresource Technology	1997 – 2002
Geomicrobiology Journal	1999 – present
Applied and Environmental Microbiology	1999 – 2007

### **Manuscripts Reviewed (ad hoc)**

Antimicrobial Agents and Chemotherapy	2007
Applied and Environmental Microbiology	1994 - 1997
Archives of Microbiology	2001
Biodegradation	1994, 1995
Biofouling	2001, 2002
Biometals	2000
Biotechnology Progress	1996 - 1997
Canadian Journal of Microbiology	1986, 1989-1993, 1995 - 1997, 2000-2002
Cells and Materials	1992 - 1996
Chemical Geology	1999
Environmental Science and Technology	2001
FEMS Immunology and Medical Microbiology	1998
FEMS Microbiology Letters	2004-2006, 2008
Food Microbiology	2000
Geomicrobiology Journal	1989, 1994, 1998
Infection and Immunity	2002, 2007
Int J Systematic and Evolutionary Microbiol.	2007, 2008
Journal of Applied Microbiology	2008
Journal of Bacteriology	2002, 2007
Journal of Microbiological Methods	2001
Langmuir	1998
Lancet	1998
Microbial Ecology	2008
Proceedings of the National Academy of Sciences	2007
Science	1996
Texas Journal of Science	1996
Trends in Food Science and Technology	1994

### **Guest Editor**

Cells and Materials	1994 - 1996
Canadian Journal of Microbiology	1995
Proceedings of the 8th International Symposium for Microbial Ecology	1998

### **Grant Reviewer and Panelist (\*)**

Wellcome Trust, UK	2005
NIH - ZRG1 IDM-A Microbial Pathogenesis Panel*	2004, 2005 (3X), 2006 (3X), 2007, 2008 (2X)

NIH - OBM-1 study section\* ad hoc 2002  
 National Research Foundation, South Africa 2002  
 NIH - GRM Study Section ad hoc teleconference\* 2002 (panel chair)  
 National Science Foundation 2000, 2001  
 American Society for Microbiology  
 Undergraduate Research Fellowships Panel Member\* 2000-2002  
 NIH - Bacteriology and Mycology Study Section BM-1\* ad hoc 2001, 2002, 2004  
 NIH - NIDCR Special Emphasis Panels\* 1999, 2000 (twice), 2001 (3X, once as panel chair),  
 2002 (2X, once as panel chair), 2004  
 NIH - NIAID Special Emphasis Panel\* 1999  
 USDA 1999, 2001  
 National Environment Research Council, UK 1999  
 Food and Drug Administration 1998  
 FIPSE, US Dept. Education\* 1997  
 National Science Foundation 1994, 1999, 2003  
 Kidney Foundation of Canada 1991, 1994  
 Medical Research Council of Canada 1992, 1993  
 National Sea Grant College Program 1991

## II. SCHOLARLY/CREATIVE PUBLICATIONS (\*\*- denotes TX State student author)

### BOOKS

#### SCHOLARLY MONOGRAPHS:

1. **McLean, R.J.C.**, J.R. Lawrence, D.R. Korber, and D.E. Caldwell. 1992. *Proteus mirabilis* biofilm protection against struvite crystal dissolution and its implications in struvite urolithiasis. *Urology/Nephrology Digest* **4**: 28 - 29. (highlights of Journal of Urology **146**: 1138-1142)

#### TEXTBOOKS (Written at TX State)

1. E.C.S. Chan, M.J. Pelczar, Jr., N.R. Krieg, and **R.J.C. McLean**. 1997. *Laboratory exercises in microbiology*, abridged sixth edition with biology 3440 lecture notes. McGraw-Hill, New York, 327 pp.

2. *Microbiology Course Notes and Laboratory Exercises*, 1999. **R.J.C. McLean**, LJ Smith and K Smith - McGraw-Hill, New York (now in 4th edition, publication date 2008)

#### EDITED BOOKS: (Written at TX State)

1. Veliky, I.A. and **R.J.C. McLean** (eds). 1994. *Immobilized biosystems theory and practical applications*, Blackie Academic and Professional, Glasgow, Scotland, 342 pp.

2. **McLean, R.J.C.** and AW Decho. 2002. *Molecular ecology of biofilms*. Horizon Scientific Press, Wymondham, UK, 123 pp.

#### CHAPTERS IN BOOKS:

1. **McLean, R.J.C.** and T.J. Beveridge. 1990. Metal binding capacity of bacterial surfaces and their ability to form mineralized aggregates, p.185-222. In H.L. Ehrlich and C.L. Brierley (ed.), *Microbial mineral recovery*, McGraw-Hill, New York.

2. **McLean, R.J.C.**, D.E. Caldwell, and J.W. Costerton. 1994. Biofilms, naturally occurring communities of immobilized cells, p.289-335. In I.A. Veliky and **R.J.C. McLean** (ed.), *Immobilized biosystems theory and practical applications*, Blackie Academic and

Professional, Glasgow, Scotland.

3. **McLean, R.J.C.**, J.C. Nickel, and M.E. Olson. 1995. Biofilm associated urinary tract infections, p.261-273. In H.M. Lappin-Scott and J.W. Costerton (ed.), *Microbial biofilms*, Cambridge University Press, Cambridge, UK.
4. **McLean, R.J.C.** 2002. An overview of biofilm molecular ecology, In: RJC McLean and AW Decho (eds.), *Molecular ecology of biofilms*. Horizon Scientific Press, Wymondham, UK, pp 1-21.
5. Morris, CE, MB Barnes, and **R.J.C. McLean**. 2002. Biofilms on Leaf Surfaces: Implications for the Biology, Ecology and Management of Populations of Epiphytic Bacteria, In: SE Lindow, EI Hecht-Poinar, and VJ Elliott (eds.), *Phyllosphere Microbiology*. American Phytopathological Society, St. Paul, MN. Chapter 10 pp 139-155.
6. **McLean, R.J.C.**, CL Bates\*\*, CL McGowin\*\*, MB Barnes, and GM Aron. 2003. Methods for studying biofilms, In: M Ghannoum and GA O'Toole (eds.), *Microbial Biofilms*, American Society for Microbiology, Washington DC, Chapter 20, pp 379-413.
7. **McLean, RJC**, SA Bryant\*\*, DA Vattem, M Givskov, TB Rasmussen, and N Balaban. 2008. Detection In Vitro of Quorum-Sensing Molecules and Their Inhibitors, In: N Balaban (ed), *The Control of Biofilm Infections by Signal Manipulation*, Springer-Verlag, Heidelberg, chapter 3, pp 39-50.
8. Welsh A.K.\*\* and **R.J.C. McLean**. 2007. Characterization of bacteria in mixed biofilm communities using denaturing gradient gel electrophoresis. *Current Protocols in Microbiology*, Unit 1.E.1.
9. **McLean R.J.C.** and T.R. Simpson. 2008. Preparing for biofilm studies in the field. *Current Protocols in Microbiology*, Unit 1B.4.1-1B.1.14

ARTICLES (peer reviewed)

1. **McLean, R.J.C.**, K.-J. Cheng, and J.W. Costerton. 1984. Localization of rumen wall-adherent ureolytic bacteria. *Canadian Journal of Animal Science* **64(Supplement)**: 60 – 61.
2. **McLean, R.J.C.**, K.-J. Cheng, W.D. Gould, and J.W. Costerton. 1985. Cytochemical localization of urease in a rumen *Staphylococcus* sp by electron microscopy. *Applied and Environmental Microbiol.* **49**: 253 – 255.
3. **McLean, R.J.C.**, J.C. Nickel, V.C. Noakes, and J.W. Costerton. 1985. An *in vitro* study of infectious kidney stone genesis. *Infection and Immunity* **49**: 805 – 811.
4. Casis, R., N. Fuller, L.G. Hepler, **R.J.C. McLean**, A. Skauge, N.S. Srinivasan, and H. Yan. 1985. Specific heat capacities of bitumens and heavy oils, reservoir minerals, clays, dehydrated clays, asphaltenes, and cokes. *AOSTRA Journal of Research* **1**: 163 – 173.
5. **McLean, R.J.C.**, K.-J. Cheng, W.D. Gould, J.C. Nickel, and J.W. Costerton. 1986. Histochemical and biochemical urease localization in the periplasm and outer membrane

- of two *Proteus mirabilis* strains. Canadian Journal of Microbiology **32**: 772 – 778.
6. Nickel, J.C., M.E. Olson, **R.J.C. McLean**, S.K. Grant, and J.W. Costerton. 1987. An ecologic study of infected urinary stone genesis in an animal model. British Journal of Urology **59**: 21 – 30.
7. **McLean, R.J.C.**, J.C. Nickel, K.-J. Cheng, and J.W. Costerton. 1988. The ecology and pathogenicity of urease-producing bacteria in the urinary tract. Critical Reviews in Microbiology **16**: 37 – 79.
8. **McLean, R.J.C.**, J.C. Nickel, T.J. Beveridge, and J.W. Costerton. 1989. Observations of the ultrastructure of infected kidney stones. Journal of Medical Microbiology **29**: 1 – 7.
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#### MANUSCRIPTS SUBMITTED OR IN PREPARATION

1. \*\*Nath, S., GM Aron, GM Southard, and **RJC McLean**. 2009. Biofilms Can Harbor Large Mouth Bass Virus. Journal of Aquatic Animal Health., in revision

2. \*\*Boswell, WT, \*\*MM Weber, JE Momb, W Fast, and **RJC McLean**. 2008. Heterologous Expression of N-Acyl-L-Homoserine Lactone Hydrolase Provides a Modest Competitive Benefit to *Escherichia coli* Disruption of Biofilms. FEMS Microbiology Letters, submitted for publication.

3. \*\*Weber MM, CL French, MB Barnes, DA Siegele, and **RJC McLean**. 2008. Two genes, *agaB* and *atoS*, associated with central metabolism, and an uncharacterized gene, *yjfO* (*bhsB*), influence *Escherichia coli* biofilm formation and stress response. Journal of Bacteriology, in revision.

#### ABSTRACTS and PRESENTATIONS since first academic appointment in 1988 (Presenting author underlined, other symbols as indicated previously)

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2. **McLean, R.J.C.**, and T.J. Beveridge. 1988. Influence of metal ion charge on binding capacity to bacterial capsules. 88th Annual Meeting, American Society for Microbiology, May 8 - 13, Miami Beach, FL, USA. abstract Q146

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7. **McLean, R.**, J.C. Nickel, J. Clark, A. Lablans, and J. Downey. 1991. Crystallization inhibition of *Proteus mirabilis* induced struvite formation. American Urological Association, Toronto, ON, June 2-5, 1991, J. Urol. **145**: 419A, abstract 826.
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  11. Dumanski, A.J. and **R.J.C. McLean**. 1992. Slime and kidney stones - is there a link? Canadian Society of Microbiologists, St. John's NF, June 1992, abstract IN8.
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  13. **McLean, R.J.C.**, A.A. Hussain, M. Sayer, D.J. Hughes, and T.J.N. Smith. 1993. Antibacterial activity of multilayer Ag/Cu surface films on catheter material. Canadian Society of Microbiologists / Society for Industrial Microbiology Annual Meeting, Toronto, ON, Canada
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- All following articles represent TX State work**
16. K.A. Dunn\*\* , **R.J.C. McLean**, G.R. Upchurch, Jr., and R.L. Folk. 1994. Biofilm enhancement of leaf fossilization. Texas Branch, American Society for Microbiology, College station, Tx
  17. P.A. White\*\* , **R.J.C. McLean**, A. McKerrow, and M.J. Stillman. 1994. The effect of metal ions on the tertiary structure of *Escherichia coli* K1 capsule. Texas Branch, American Society for Microbiology, College station, Tx
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Geological Society of America, New Orleans, LA

19. K.A. Dunn\*\*, **R.J.C. McLean**, G.R. Upchurch, Jr., and R.L. Folk. 1995. Biofilm promotion of leaf fossilization. Canadian Society of Microbiologists, Kingston, ON, Canada, abstract EM4
20. P.A. White\*\*, **R.J.C. McLean**, A. McKerrow, and M.J. Stillman. 1995. The effect of metal ions on the tertiary structure of *Escherichia coli* K1 capsule. Canadian Society of Microbiologists, Kingston, ON, Canada, abstract MS1.
21. M. Whiteley\*\*, E. Brown\*\*, and **R.J.C. McLean**. 1996. Effects of nutrient limitations and species composition on natural biofilm development. Texas Branch meeting, American Society for Microbiology, San Antonio, Tx (winner of the O.B. Williams Award for outstanding student research in general microbiology)
22. M.K. Koenig\*\* and **R.J.C. McLean**. 1996. Parameters affecting the conformation of N-acetylneuraminic acid, *Escherichia coli* K1 capsular polysaccharide. Texas Branch meeting, American Society for Microbiology, San Antonio, Tx
23. E. Brown\*\*, M. Whiteley\*\*, and **R.J.C. McLean**. 1996. Chemostat apparatus for the study of biofilm physiology and genetics. American Society for Microbiology Conference on Biofilms, Snowbird UT (selected to be included in conference workshop)
24. K.A. Dunn\*\*, **R.J.C. McLean**, G.R. Upchurch, Jr., and R.L. Folk. 1996. Enhancement of leaf fossilization by bacterial biofilms. American Society for Microbiology Conference on Biofilms, Snowbird UT, abstract B67
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27. K.A. Dunn\*\*, G.R. Upchurch Jr., **R.J.C. McLean**, and R.L. Folk. 1997. Biofilm enhancement of leaf fossilization potential: experimental evidence. Botanical Society of America, Montréal, PQ
28. J.L. Adams\*\*, **R.J.C. McLean**, and D.A. Siegele. 1998. The importance of slow-growth genes on biofilm formation. American Society for Microbiology, Atlanta GA.
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30. **R.J.C. McLean**, C. Fuqua, D.A. Siegele, J.L. Adams\*\*, and M. Whiteley. Biofilm growth and its role in mineral formation. Eighth International Symposium on Microbial Ecology, Halifax, NS Canada.
31. L.L. Lynch, B. Kirkland-George, L. Rahnis, R.L. Folk, I. Molineux, and **R.J.C. McLean**.

1998. Nanometer-scale features in calcite: non-biological origins of purported nanofossils. Geological Society of America, Toronto, ON Canada.

32. \*\*GJ Balzer, M Whiteley and **R.J.C. McLean**, 1999. Assessment of the green fluorescent protein in biofilm structure visualization using scanning confocal laser microscopy. 99th Annual Meeting, American Society for Microbiology, Chicago IL (awarded conference student travel grant)

33. \*\*S Prabhakaran, J Teichman, SS Spore, RL Folk, and RJC McLean, 1999. Investigation of heat as a possible source of nano-sized objects (nanobacteria) implicated in kidney stone formation. 99th Annual Meeting, American Society for Microbiology, Chicago IL (abstract chosen for conference press release)

34. **R.J.C. McLean**, MB Barnes, and JH Koo, 1999. Pseudomonas aeruginosa biofilm formation under microgravity conditions during space flight. 99th Annual Meeting, American Society for Microbiology, Chicago IL.

35. \*\*BD Corbin, **R.J.C. McLean**, and GM Aron, 1999. Biofilm susceptibility to bacteriophage infection. 99th Annual Meeting, American Society for Microbiology, Chicago IL. (abstract chosen for conference press release)

36. \*\*DA Limbaugh, EA Weaver, M Whiteley, RJC McLean, and GM Aron. Isolation and preliminary characterization of a bacteriophage for *Chromobacterium violaceum*. 99th Annual Meeting, American Society for Microbiology, Chicago IL.

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39. **R.J.C. McLean**. 2000. Controlling bacterial adhesion to surfaces by cell signaling molecules and its potential applications for space flight water recycling systems. NASA Investigator Working Group Meeting, Houston, TX.

40. \*\*MK Windham, \*\*AM Roth, C. Fuqua, RJC McLean. 2000. Acyl homoserine lactone recruitment of bacteria into biofilms. Abstract 75, Biofilms 2000 Meeting, Big Sky, MT. (awarded conference travel grant)

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2000, Berkeley, CA (invited lecture)

44. **R.J.C. McLean**, \*\*KL Fuson, and DA Siegele. 2001. Transcriptional profiles of *Escherichia coli* gene expression in biofilms. NASA Investigator Working Group, Houston, TX, March 7, 2001.
45. DM Garcia and **R.J.C. McLean**. 2001. NIH Bridges to the baccalaureate program at Southwest Texas State University. Grants Resource Center, American Association of State Colleges and Universities Meeting, Washington DC. (invited lecture)
46. \*\*KL Fuson, **R.J.C. McLean**, and DA Siegele. 2001. Transcriptional profiles of *Escherichia coli* gene expression in biofilms. Spring meeting Texas Branch American Society for Microbiology, Junction TX. (paper was selected the winner of the Charlie Gauntt Award for best graduate student presentation).
47. \*\*KL Fuson, **RJC McLean**, GD Ledwell, and DA Siegele. 2001. Biofilm-induced gene expression in chemostat grown *Escherichia coli* as determined by a gene array. 101st Annual Meeting, American Society for Microbiology, Orlando FL, abstract Q 21.
48. **R.J.C. McLean**, LS Pierson, and C Fuqua. 2001. Bioassay for the identification of naturally-occurring quorum signaling inhibitors. 101st Annual Meeting, American Society for Microbiology, Orlando FL, abstract Q 23.
49. \*\*CL Bates, MJ Forstner, MB Barnes, \*\*M Whiteley, J Pastorini, and **RJC McLean**. 2001. Population analysis of aquifer biofilm isolates. Texas Branch fall meeting, American Society for Microbiology, San Antonio, TX
50. \*\*CL Bates, MJ Forstner, MB Barnes, \*\*M Whiteley, J Pastorini, and **RJC McLean**. 2002. Population genetic analysis of aquifer biofilm isolates. Texas Branch spring meeting, American Society for Microbiology, Junction, TX
51. \*\*MK Windham, MB Barnes, C Fuqua, MRJ Forstner, and **RJC McLean**. 2002. Novel Bacterial Influence on Microbial Diversity in Aquatic Biofilms. 102nd Annual Meeting, American Society for Microbiology, Salt Lake City UT, abstract Q 281
52. \*\*MJ Leal, \*\*TE Sanger, \*\*CL Bates, and **RJC McLean**. 2003. DNA Extraction and PCR Amplification of 16S rRNA from Endolithic Bacteria in Limestone. Texas Branch spring meeting, American Society for Microbiology, Junction, TX
53. P Hathorn, RL Sink, and **RJC McLean**. 2004. Prokaryotic Microbial Community Profiling of a Chihuahuan Desert Spring using Denaturing Gradient Gel Electrophoresis (DGGE). 104th annual meeting, American Society for Microbiology, New Orleans LA, abstract Q 433
54. \*\*S Newland, \*\*AK Welsh, and **RJC McLean**. 2005. Microgravity enrichment of aquatic bacteria. Texas Branch spring meeting, American Society for Microbiology, Fischer, TX
55. DA Vattem, \*\*K Mihalik, S Crixell, and **R McLean**. 2006. Quorum sensing inhibitors of *Pseudomonas aeruginosa* from *Camellia sinensis*. 106th annual meeting, American Society for Microbiology, Orlando FL, abstract A009

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57. \*\*SA Bryant, \*\*AK Welsh, and **RJC McLean**. 2006. Microgravity enrichment of aquatic bacteria. 106th annual meeting, American Society for Microbiology, Orlando FL, abstract Q231.
58. \*\*V Huerta, **RJC McLean** and D Vattem. 2006. Green tea and yerba mate effects on biofilms. Texas Branch ASM, Fall meeting, Galveston TX.
59. \*\*WT Boswell, W Fast, and **RJC McLean**. 2007. Ecological influence of quorum quenching lactonase on bacterial biofilms. 3rd ASM Conference on Cell Cell Communication in Bacteria, Austin TX, abstract 101B
60. \*\*V Huera, \*\*K Mihalik, S Crixell, **RJC McLean**, and DA Vattem. 2007. Herbs, spices and medicinal plants used in hispanic traditional medicine can inhibit quorum sensing in *Pseudomonas aeruginosa*. 3rd ASM Conference on Cell Cell Communication in Bacteria, Austin TX, abstract 51B
61. \*\*S Nath, GM Southard, GM Aron, and **RJC McLean**. 2008. Real time PCR detects eukaryotic virus within biofilms. Texas Branch ASM, Fall meeting, Austin, TX
62. \*\*MM Weber, \*\*CL French, MB Barnes, DA Siegele, and **RJC McLean**. 2008. Two genes, *agaB* and *atoS*, associated with central metabolism, and an uncharacterized gene, *yjfo* (*bhsB*), influence *Escherichia coli* biofilm formation and stress response. Texas Branch ASM, Fall meeting, Austin, TX

#### COMMERCIAL REPORTS (Non-Refereed)

1. **R.J.C. McLean** and M.B. Barnes. 1995. *Pseudomonas aeruginosa* colonization of catheter material. Report prepared for ICET Inc., Norwood, MA
2. **R.J.C. McLean**. 2000. Effect of microhydrin on bacterial growth. Report prepared for Royal Body Care, Irving, TX.
3. **R.J.C. McLean**. 2008. Effect of urinary catheter formulations in preventing biofilms. Report prepared for ICET Inc., Norwood, MA

#### AWARDS

##### 1995

Excellence in Scholarship, Tri Beta Biological Honors Society, TX State

##### 1996

Biographee: Who's Who in Science and Engineering, 3rd edition, Marquis Publishing, New Providence, NJ

##### 2000

Presidential Award for Scholarly and Creative Activity, Southwest Texas State University College of Science Nominee, Presidential Award for Scholarly and Creative Activity Biographee: Who's Who in Medicine and Healthcare, 3rd Edition, Marquis Publishing, New Providence, NJ

**2001**

Biographee: Who's Who in the World, 18th Edition, Marquis Publishing, New Providence, NJ

**2002**

Biographee: Who's Who Among America's Teachers, 7th Edition, Educational Communications, Inc., Lake Forest IL

Biographee: Who's Who in Science and Engineering, 6th Edition, Marquis Publishing, New Providence, NJ

Biographee: 2000 Outstanding Intellectuals of the 21st Century - 1st Edition, International Biographical Centre, Cambridge CB2 3QP UK

Biographee: 2000 Eminent Scientists of Today - 1st Edition, International Biographical Centre, Cambridge CB2 3QP UK

Biographee: Who's Who in America, 57th Edition, Marquis Publishing, New Providence NJ

**2003**

Biographee: Who's Who in Science and Engineering, 7th Edition, Marquis Publishing, New Providence, NJ

**2004** Biographee: Who's Who in America, 58th Edition, Marquis Publishing, New Providence NJ

**2005**

Presidential Lecturer, Texas State University-San Marcos, San Marcos, TX

Biographee: Who's Who Among America's Teachers, 9th Edition, Educational, Austin TX

Biographee: Who's Who in America, 59th Edition, Marquis Publishing, New Providence NJ

**2006**

Biographee: Who's Who in America, 60th Edition, Marquis Publishing, New Providence NJ

Biographee: Who's Who in American Education, 7th Edition, Marquis Publishing, New Providence NJ

**2007**

Biographee: Who's Who in America 61st Edition, Marquis Publishing New Providence NJ

Biographee: Who's Who in American Education, 8<sup>th</sup> Edition, Marquis Publishing

**CONTRACTS and GRANTS (only external grants shown since beginning at TX State)**

1. USDA - "Scanning UV/Vis Spectrophotometer" 1994 (\$7,500) (collaborator with P. Barnes)
2. ICET, Inc. "Biofilm resistance of catheter coatings" 1994-1995 (\$1,500)
3. NASA-AMES - "Biofilm Formation on Modified Polymers" 1995-1996 (\$35,000)
4. Texas Higher Education Coordinating Board ARP - 1998-1999 "Investigation of the Role of Nannobacteria in Mineral Formation" (\$110,096)
5. EPA "Waste minimization in the petrochemical industry" 1999-2001 (\$1.2 M) (Project 4 leader, P. Cassidy - PI) (RJCM Portion \$116,617)
6. NIH "Research Oriented Bridges to Baccalaureate Program" 1999-2002 (\$514,773) (co-PI with D.M. Garcia)
7. NIH "Transcriptional Profiles of *Escherichia coli* Biofilms" 2002-2004 (\$145,328)
8. US Air Force (subcontract) "Wastewater Treatment" 2003-2005 (\$210,000)
9. NASA Johnson Space Center "Identification of Space-grown microorganisms" 2003-2004 (\$10,000)
10. ICET Inc. "Evaluation of biofilm resistant urinary catheters" 2007-2008 (\$10,500)
11. Texas Higher Education Coordinating Board ARP "Profiling Bacterial Species' Interactions in Mixed Cultures" \$150K (Texas State portion \$100K) (role PI)

**III. OTHER SCHOLARLY/CREATIVE ACTIVITIES**

INVITED TALKS, LECTURES (Since appointment to TX State faculty in 1993)

**1993** Environment Canada, Toronto, Ont, Canada, Invited tutorial participant, "Effects of Microorganism

**1994** Texas A&M University, Faculty of Nutrition, College Station, TX

**1995** Advanced Sterilization Products, Irvine, CA

**1997** Trinity University, Department of Biology, San Antonio, TX

**1998**

Arizona State University, Departments of Microbiology and Plant Science, Tempe, AZ

Montana State University, Center for Biofilm Engineering and Department of Microbiology, Bozeman, MT

NASA Johnson Space Center – Life Support Division, Houston TX

Eighth International Symposium on Microbial Ecology, Halifax NS, Canada. Biofilm Symposium Convenor and participant, "Biofilm growth and mineral formation"

**1999**

University of Manitoba, Department of Microbiology, Winnipeg, MB, Canada

University of Texas - Houston, Department of Microbiology, Houston, TX

Tulane University, Department of Microbiology, New Orleans, LA

American Chemical Society, Branch Meeting, Ontario CA, Invited speaker

Texas Branch, American Society for Microbiology, Junction TX, Invited speaker "Bacterial biofilms and their growth on earth and in space"

99th Annual Meeting, American Society for Microbiology, Chicago IL, Symposium Convenor and speaker, "Cell-cell signaling in bacterial biofilms"

University of Manitoba, Department of Microbiology, Winnipeg, MB Canada

Texas Branch, American Society for Microbiology, Fort Worth TX, Invited speaker and symposium organizer, "Bacterial biofilms in earth and space"

**2000**

Phyllosphere 2000, International Conference on Leaf Surface Microbiology, Berkeley CA, Invited Speaker "The adaptive significance of microbial biofilms"

Texas A&M University, Department of Biology, Molecular Biology Journal Club

University of Guelph, Department of Environmental Biology, Guelph ON Canada

University of Guelph, Dept. Environmental Biology, Ph.D. external examiner

Texas Branch, American Society for Microbiology fall meeting, Corpus Christi, TX "Biofilm Research in Texas" symposium organizer and speaker

**2001**

Florida International University, Department of Biological Sciences, Miami, FL

San Antonio College, Department of Chemistry, San Antonio, TX

Brock University, Department of Biological Sciences, St. Catharines, ON

University of Texas at El Paso, Department of Biological Sciences, El Paso, TX

KTEP (National Public Radio) El Paso, TX (Radio interview on biofilm research)

Cornell University, Section of Microbiology, Ithaca, NY

Queen's University, Department of Microbiology and Immunology, Kingston, ON

Southwest Texas State University, Department of Biology, San Marcos, TX

St. Philip's College, Department of Natural Science, San Antonio, TX

**2002**

Palo Alto College, San Antonio, TX  
San Marcos High School, San Marcos, TX  
University of Pretoria, Pretoria, South Africa MS thesis external examiner, Department of Microbiology and Plant Pathology, (thesis review done electronically)  
Texas A&M University, Department of Medical Microbiology, College Station, TX  
Oklahoma State University, Department of Microbiology, Stillwater, OK  
University of Oklahoma, Department of Botany and Microbiology, Norman, OK  
Baylor University, Department of Biology, Waco, TX

**2003**

University of Houston, Department of Biology and Biochemistry, Houston, TX  
University of Texas, School of Integrative Biology, Austin, TX  
Agriculture Canada, Lethbridge Research Centre, Lethbridge, AB Canada  
Prairie Lea High School, Science classes, Prairie Lea, TX  
American Society for Microbiology Conference on Polymicrobial Infections, invited speaker, Lake Tahoe, NV  
Midwestern State University, Department of Biology, Wichita Falls, TX

**2004**

Wimberley Junior High, 6th and 8th grade science classes  
Texas Woman's University, Department of Biology  
Texas Branch, American Society for Microbiology, invited speaker, Houston, TX  
PhD external examiner, Richard Kwasi Amankwah, Dept. Mining Engineering, Queen's University, Kingston, Ontario

**2005**

Texas Branch - American Society for Microbiology, Denton, TX invited speaker "Biofilms in the Environment"  
Texas Branch - American Society for Microbiology, Denton, TX invited round table host "Balancing Microbiology Careers and Family"  
State University of New York at Buffalo, Dept. Oral Biology, Buffalo, NY  
Texas State University-San Marcos, Presidential Lecture

**2006**

106th Annual Meeting, American Society for Microbiology, Orlando FL invited speaker "Academic Careers at a Masters' Insitution"  
NPR (National Public Radio), Radio interview and feature on panspermia in relation to Icarus publication  
Ivanhoe Broadcast News, Television interview and feature on panspermia  
Baltimore Sun, Houston Chronicle, Austin American-Statesman, and San Antonio Express-News, Newspaper interviews resulting in articles on panspermia in relation to Icarus publication  
Science and Theology News, Magazine interview resulting in article on panspermia in relation to Icarus publication  
New Scientist (UK), Interview resulting in article on panspermia in relation to Icarus publication  
Baylor College of Medicine, Department of Virology and Microbiology, Houston, TX  
Trinity University, Department of Biology, San Antonio, TX  
Centro Milstein, Ciudad de Buenos Aires, Argentina

**2007**

University of Houston-Downtown, Dept. Natural Sciences, Houston, TX

107th Annual Meeting, American Society for Microbiology, Toronto ON invited speaker  
"Educational aspects of space flight microbiology"  
Texas Branch American Society for Microbiology, fall meeting, Huntsville TX invited speaker  
"Chemical Ecology of Biofilms"  
New Scientist (UK), Interview related to Wilson et al., PNAS article on microgravity-enhanced  
virulence

**2008**

Biofilm Workshop, DFW Airport, US Military Research invited workshop September 2008.  
Geological Society of America, annual meeting, Houston TX (invited speaker), September 2008  
American Society for Microbiology, Branch Organization Committee retreat Washington DC,  
October 2008  
American Society for Microbiology, invited to speak on educational aspects of biofilms and  
quorum signal at May 2009 meeting in Philadelphia

**CONSULTING (while at TX State):**

ICET Inc., Norwood, MA 1995, 2007-8  
Sulzer-Carbomedics, Inc., Austin, TX 1999