

CURRICULUM VITAE (2021)

NAME: Daniel V. Lim, Ph.D.
Distinguished University Professor Emeritus
University of South Florida
Tampa, Florida

E-mail: Lim@usf.edu

BIRTHDATE: April 15, 1948
Houston, Texas

EDUCATION: B.A. in Biology, Rice University (1970)
Ph.D. in Microbiology, Texas A&M University (1973)
Postdoctoral Fellow, Department of Microbiology and Immunology, Baylor
College of Medicine (1973-1976)

HONORS AND AWARDS:

Jesse H. Jones Academic Scholarship (1966-1970)
Houston Endowment, Inc. Academic Scholar (1966-1970)
Rice University Tuition Grant (1966-1970)
Robert A. Welch Foundation Predoctoral Fellow (1971-1973)
Robert A. Welch Foundation Postdoctoral Fellow (1973-1976)
Phi Sigma Biological Honor Society, Graduate Research Award for the
Outstanding Dissertation in the United States (1974)
Searle/Donald Richardson Memorial Award, American College of Obstetrics
and Gynecology (co-recipient with Walter J. Morales) (1987)
Margaret Green Outstanding Teacher Award, Southeastern Branch American
Society for Microbiology (1989)
Governor's Award for Outstanding Contribution in Science and Technology as
the Leading Scientist in Biotechnology in Florida (1990)
Outstanding Undergraduate Teaching Award, University of South Florida
(1991, 2000)
Teaching Incentive Program Award for Outstanding Undergraduate Teaching,
University of South Florida (1994, 1997)
Professorial Excellence Program Award, University of South Florida (1998)
P.R. Edwards Award for Excellence in Microbiology, Southeastern Branch
American Society for Microbiology (2001)
President's Award for Faculty Excellence, University of South Florida (2003)
Christopher Columbus Fellowship Foundation 2004 Homeland Security Award in
Biological, Radiological, Nuclear Field (2004)
Tampa City Council Commendation for Homeland Security Award (2004)

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HONORS AND AWARDS (Continued):

Ivan Roth Award for Outstanding Service and Contributions in Microbiology,
Southeastern Branch American Society for Microbiology (2004)
Outstanding Faculty Research Achievement Award, University of South Florida
(2005)
Elizabeth O. King Award for Notable and Significant Contributions in the
Diagnostic, Public Health, or Medical Microbiology Field, Southeastern
Branch American Society for Microbiology (2014)

PROFESSIONAL AND HONORARY SOCIETIES:

Fellow, American Academy of Microbiology (Elected 1986)
Fellow, American Association for the Advancement of Science (Elected 2013)
American Society for Microbiology (ASM Council, 2000-2006; Career
Development Committee, 1999-2008; Branch Organization Committee and
Region IV Planning Coordinator, 2008-2011)
Southeastern Branch, American Society for Microbiology (President, 1990-
1991; Branch Councilor, 2000-2006)
Inter-American Society for Chemotherapy (Vice President, 1983-1989)
Sigma Xi
Phi Sigma Biological Honor Society
International Association for Food Protection
American Association for the Advancement of Science

ACADEMIC APPOINTMENTS:

Robert A. Welch Foundation Postdoctoral Fellow, Department of Microbiology
and Immunology, Baylor College of Medicine (1973-1976)
Assistant Professor, Department of Biology, University of South Florida (1976-
1981)
Associate Professor, Department of Biology (Tenured), University of South
Florida (1981-1987)
Associate Faculty, Tampa General Hospital School of Medical Technology
(1982-1988)
Interim Chairman, Department of Biology, University of South Florida (1985-
1987)
Founding Director, Institute for Biomolecular Science, University of South
Florida (1988-1993)
Professor, Department of Biology, University of South Florida (1987-2006)
Founding Co-Director, Florida Center of Excellence for Biomolecular
Identification and Targeted Therapeutics (2006-2011)
Professor, Department of Global Health, College of Public Health, University of
South Florida (2000-2017)
Distinguished University Professor, University of South Florida (2006-2017)
Distinguished University Professor Emeritus, University of South Florida (2017-)

COMMITTEE APPOINTMENTS:

Microbiology Degree Committee (1976-1987; Chairman, 1978-80)
Ph.D. Examination Committee (1976-1979; Chairman, 1979)
USF President's *Ad Hoc* Committee on University Internal Affairs (1977)
Medical Technology Committee (1979-1988)
Seminar Committee (1980)
Graduate Admissions Committee (1980, 1985-1988)
Search Committees for Immunologist, Molecular Geneticist, Animal Virologist (1976-1982)
Faculty Advisory Committee, Department of Biology (1980-1982)
Curriculum Committee, Department of Biology (1980-1983)
Search Committee for Molecular Microbiologist (Chairman, 1983)
Search Committee for Dean, College of Natural Sciences (1983)
NIH Biomedical Research Support Grant Committee (1980-1984)
Tenure Committee, College of Natural Sciences (1985-1986)
Board of Regents Review Committee, Department of Biology (1986)
Search Committee for Immunologist (1989)
Patricia and Richard Wood Endowed Chair Search Committee (Chairman, 1990-1993)
Honors and Awards Committee, College of Arts and Sciences (1992-1994)
Faculty Advisory Committee, Department of Biology (Chairman, 1993-1995; 1999)
Planning Committee, Department of Biology (1993-1996)
Seminar Committee, Department of Biology (1996-1998)
Search Committees for Microbiologist (Chairman, 1993, 1998)
Curriculum Committee, Department of Environ. & Occup. Health (1998-2000)
Honors Committee, Department of Biology (1999-2001)
Search Committee for Developmental Biologist (2001)
Graduate Committee, College of Arts and Sciences (2001-2003)
Awards and Credentialing Committee, Department of Biology (Chairman, 2001-2003)
Search Committee for Biology Instructor (2003)
Search Committee for Developmental Biologist (2004)
Search Committee for Molecular Microbiologist (Chairman, 2006)
Faculty Advisory Committee, Department of Cell Biology, Microbiology and Molecular Biology (2006-2011)
Distinguished University Professor Review Committee, College of Arts and Sciences (2009)

STUDY SECTIONS AND REVIEW PANELS:

NASA Bioengineering Review Panel (2000)
NIH Bioengineering Research Partnership Study Section (2000-2001)
NIH/NIAID SBIR/STTR Infectious Diseases & Microbiology Study Section (2000-2005)

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STUDY SECTIONS AND REVIEW PANELS (Continued):

NIH/NIAID Partnerships for Novel Therapeutics, Diagnostic and Vector Control Strategies in Infectious Diseases Study Section (2002-2003)
Department of Defense/DTRA Senior Technical Review Committee (2001-2003)
NIH/NIAID Regional Centers of Excellence for Biodefense and Emerging Infectious Diseases Research Reviewer (2003)
Department of Defense/DARPA Senior Technical Review Committee (2001-2003)
USDA National Research Initiative Competitive Grants Program *Ad Hoc* Reviewer (2003)
USDA Agricultural Research Service National Program ad hoc Reviewer (2003)
USDA SBIR Program ad hoc Reviewer (2003)
Naval Research Laboratory/American Society for Engineering Education Postdoctoral Fellowship Field Reviewer (2003)
National Academies/National Research Council, Indicators of Waterborne Pathogens, Invited Reviewer (2003)
United States-Israel Binational Agricultural Research & Development (BARD) Fund Proposal Reviewer (2004)
Louisiana Board of Regents Support Fund R&D Program Reviewer (2004)
Singapore Science & Engineering Research Council, Invited Reviewer (2005)
National Academies/National Research Council, Committee on Water System Security Research (2004-2007)
National Academies/National Research Council, Ohio Third Frontier Program Review Committee (2008)

CORPORATE CONSULTATIONS:

Pharmacia Diagnostics/Pharmacia AB (USA/Sweden) (1979-1988)
The Conservancy (1980-1984)
GIBCO Laboratories/BRL, Life Technologies, Inc. (1982-1988)
Tetravalent, Inc. (1986-1990)
Lone Star Steel Company (1995-1997)
Environmental Biotech, Inc. (1996-1997)
Micro-Ambient (1996-1997)
Becton Dickinson Microbiology Systems (1997-1999)
Constellation Technology Corporation (2001-2003)
General Dynamics (2003)
MSE Technology Applications, Inc. (2003-2004)
Nanobac (2006)
Elion Systems (2007-2008)
Origin Tech LLC (2011-2012)

RESEARCH GRANTS (since 1998):

- A System for the Real Time/Near Real Time Identification of Food-Borne Pathogens, National Science Foundation STTR (NSF 9810459), \$39,930 (USF/Lim Portion) (9/98-8/99) (co-PI)
- Tests to Identify Specimens, Becton Dickinson, \$3,885 (10/98-10/99) (PI)
- Real Time ID of Food-Borne Pathogens by an Innovative Biosensor Assay, Florida High Technology Corridor Program, \$44,800 (12/98-12/99) (PI)
- Real Time ID of Waterborne Pathogens by an Innovative Fiber Optic Biosensor, Water Environment Research Foundation, \$124,947 (6/00-12/01) (co-PI)
- Near Real Time Detection of Microbial Contamination in Recreational Waters Using an Innovative Fiber Optic Biosensor, U. S. Environmental Protection Agency, \$50,000 (8/00-5/04) (PI)
- A Fully Autonomous and Self-Sufficient Gastrobot for Long-Term Environmental Applications, Intel Corporation, \$90,000 (5/01-4/02) (co-PI)
- Rapid Detection of Bacteria in Blood and Platelets, NIH SBIR (1R43AI051797-01), \$29,887 (USF/Lim Portion) (4/02-9/02) (co-PI)
- Methods to Improve Capture and Detection of Target Organisms for Biosensor Assays, Research International, \$7,250 (10/02-1/03) (PI)
- On Line Real Time/Near Real Time Biosensor Monitoring for Water, Pinellas County Utilities, Phases I and II, \$205,200 (8/02-9/03) (PI)
- Development & Testing of Rapid Methods for the Detection & Enumeration of Bacterial Indicators, Southern California Coastal Water Research Project, \$59,769 (USF/Lim Portion) (12/02-8/03) (co-PI)
- Botulinum Toxin and Ricin Assay Development for Taste Chip, Constellation Technology Corporation, \$195,530 (5/03-9/03) (PI)
- Detection of Human Pathogens with a Real-Time Fiber Optic Biosensor, The Cooperative Institute for Coastal and Estuarine Environmental Technology, \$198,433 (12/01-8/04) (co-PI)
- Vaccinia Virus Assay Development for Array Biosensor, Constellation Technology Corporation/Defense Threat Reduction Agency, \$60,000 (3/04-7/04) (PI)
- On Line Real Time/Near Real Time Biosensor Monitoring for Water, Pinellas County Utilities, Phase III, \$150,043 (6/04-5/05) (PI)
- Rapid Detection of Major Food-borne Pathogens, NIH SBIR (1R43AI052684-01A1), \$36,800 (USF/Lim Portion) (7/04-8/05) (co-PI)
- Integrated Immunoassay/PCR Test for Bioterrorism Agents, NIH SBIR (5R43EB001731-02), \$60,050 (USF/Lim Portion) (7/04-7/05) (co-PI)
- Antibacterially-Active Nanoparticles, National Science Foundation STTR (NSF 0419903), \$7,178 (USF/Lim Portion) (7/04-6/05) (co-Investigator)
- A Mechanistically Novel Antibiotic for Anthrax, NIH STTR (1R41AI061901-01, \$9,135 (USF/Lim Portion) (9/04-3/05) (co-Investigator)

RESEARCH GRANTS (Continued):

- Aptamer Beacon Experimental Validation, Northrop Grumman, \$13,137 (12/04-4/05) (PI)
- Evaluation of the Photon Detection System for Detection of *E. coli* O157:H7 and *Salmonella*, Healthspex, \$14,500 (10/05-3/06) (PI)
- N-Thiolated β -Lactams, NIH (5R01AI051351-03), \$50,000 (Lim Portion) (3/02-2/07) (co-Investigator)
- Real Time/Near Real Time Detection of Microbial Pathogens/Toxins Associated with Food, Water, and Surfaces (DAAD13-00-C-0037), U.S. Army Research, Development and Engineering Command (RDECOM), \$7,617,564 (8/00-8/06) (PI)
- Assessment of Patient Isolation Unit Containment Properties and Filtration Efficiency, SAIC, \$8,790 (10/07-1/08)
- Antibacterially-Active Nanoparticles, National Science Foundation SBIR Phase II, \$29,000 (USF/Lim Portion) (8/06-7/08) (co-Investigator)
- Manufacturing Platform for Immunoassays, National Science Foundation SBIR, \$15,382 (USF/Lim Portion) (7/07-6/08) (co-PI)
- Rapid Concentration and Quantification of Bacteria and Viruses from Marine Waters, The Cooperative Institute for Coastal and Estuarine Environmental Technology, \$145,893 (5/07-8/08) (co-PI)
- Real Time/Near Real Time Detection of Microbial Pathogens/Toxins Associated with Food, Water, Air, and Human Specimens (W911SR-05-C-0020), U.S. Army Research, Development and Engineering Command (RDECOM), \$3,776,657 (9/05-11/09) (PI)
- Rapid Sample Processing and Biosensor Detection of Biothreat Agents (W911SR-07-C-0084), U.S. Army Research, Development and Engineering Command (RDECOM), \$3,448,437 (9/07-3/11) (PI)
- Biothreat Agent Sample Concentration and Processing (W911SR-09-C-0005), U.S. Army Research, Development and Engineering Command (RDECOM), \$1,376,823 (12/08-6/12) (PI)
- Extraction and Identification of Pathogens from Complex Matrix Samples using Immunomagnetic Bead Separation (IMS) and Lateral Flow Immunoassays (W911SR-09-C-0005 Supplemental), U.S. Army Research, Development and Engineering Command (RDECOM), \$64,414 (8/10-6/12) (PI)
- Electrospray Deposition of Biosensor Substrates (NSF 0854354), National Science Foundation, \$117,865 (Lim Portion) (6/09-5/12) (co-PI)
- An Integrated System for In-Field Detection of Microbial Contaminants in Coastal Waters, NOAA SBIR, \$25,909 (USF/Lim Portion) (7/10-1/11)(Co-Investigator)
- Rapid Sample Processing and Agent Detection (W911SR-10-C-0020), U.S. Army Research, Development and Engineering Command (RDECOM), \$804,215 (9/10-5/13) (PI)

RESEARCH GRANTS (Continued):

- Evaluation of Cooling Towers for Collection, Concentration, and Detection of Chemical and Radiological Agents, Department of Energy/Savannah River National Laboratory, \$53,000 (3/12-9/12) (PI)
- Evaluation of Cooling Towers for Collection of Radiological Agents of Concern, Department of Energy National Nuclear Security Administration/Savannah River Nuclear Solutions, \$75,000 (4/13-9/13)
- Biothreat Agent Sample Processing and Detection (W911SR-11-C-0017), U.S. Army Research, Development and Engineering Command, \$764,701 (1/11-7/14) (PI)
- Reagentless Laser-Induced Breakdown Spectroscopy (LIBS) for Detection and Identification of Bacteria (W911SR-11-C-0017 Supplemental), U.S. Army Research, Development and Engineering Command (RDECOM), \$75,033 (1/11-7/14) (PI)
- Field Blood Donor Pathogen Kit, U.S. Special Operations Command/Draper Laboratory, \$35,001 (9/12-8/14) (PI)
- Testing and Validation of Intellisense Design PMACS Unit, Intellisense Design, \$17,500 (7/15-1/16) (PI)
- Rapid Concentration/Detection of Foodborne Pathogens from Wash Water for Enhanced Safety of Fresh Fruits and Vegetables, USDA Agriculture and Food Research Initiative Competitive Grants Program, \$499,972 (2/15-2/17) (PI)

RESEARCH PUBLICATIONS:

- (Graduate students in **boldface**; undergraduate students in *boldface italics*)
- Williams, R.P., R.H. Scott, D.V. Lim, and S.M.H. Qadri. 1976. Macromolecular syntheses during biosynthesis of prodigiosin by *Serratia marcescens*. Appl. Environ. Microbiol. 31:70-77.
- Lim, D.V., S.M.H. Qadri, and R.P. Williams. 1976. Incorporation of proline into prodigiosin by a put mutant of *Serratia marcescens*. Appl. Environ. Microbiol. 31:738-742.
- Lim, D.V., S.M.H. Qadri, C. Nichols, and R.P. Williams. 1977. Biosynthesis of prodigiosin by nonproliferating wild-type *Serratia marcescens* deficient in catabolism of alanine, histidine, and proline. J. Bacteriol. 129:124-130.
- Lim, D.V., A.N. James, and R.P. Williams. 1977. Radiolabeling of and macromolecular syntheses in *Neisseria gonorrhoeae* types 1 and 4. Appl. Environ. Microbiol. 33:328-333.
- Lim, D.V. 1978. Differences in susceptibilities of virulent strains and avirulent strains of *Neisseria gonorrhoeae* to antimicrobial agents. Antimicrob. Agents Chemother. 14:45-50.
- Lim, D.V., **R.D. Smith**, and **S. Day**. 1979. Evaluation of an improved rapid co-agglutination method for the serological grouping of beta-hemolytic streptococci. Can. J. Microbiol. 25:40-43.
- Lim, D.V. and **T. Wall**. 1980. Confirmatory identification of *Neisseria gonorrhoeae* by slide co-agglutination. Can. J. Microbiol. 26:218-222.
- Lim, D.V. and **M. Marnell**. 1980. Confirmatory identification of group D streptococci by slide co-agglutination. Curr. Microbiol. 4:151-154.
- Caldwell, J.B.** and D.V. Lim. 1981. The effects of oxygen concentration on neuraminidase production by type III group B streptococci. Curr. Microbiol. 5:175-178.
- Lim, D.V., **W.L. Rigling**, **M.H. Marnell**, J.J. Jezeski, and K.L. Smith. 1982. Isolation and identification of bacteria resembling *Streptococcus agalactiae* from commercially pasteurized milk. The Public Hlth. Lab. 40:53-58.
- Lim, D.V., K.S. Kanarek, and **M.E. Peterson**. 1982. Magnitude of colonization and group B streptococcal sepsis in newborn infants. Curr. Microbiol. 7:101-104.
- Jones, D.E.**, K.S. Kanarek, J.L. Angel, and D.V. Lim. 1983. Elimination of multiple reactions of the Phadebact *Streptococcus* co-agglutination test. J. Clin. Microbiol. 18:526-528.
- Jones, D.E.**, **E.M. Friedl**, K.S. Kanarek, J.K. Williams, and D.V. Lim. 1983. Rapid identification of pregnant women heavily colonized with group B streptococci. J. Clin. Microbiol. 18:558-560.

RESEARCH PUBLICATIONS (Continued):

- Peterson, M.E.,** B.J. Yokel, and D.V. Lim. 1984. Recovery of selected pathogens from Naples Bay, Florida, and associated waterways. *Estuaries* 7:131-136.
- Jones, D.E.,** K.S. Kanarek, and D.V. Lim. 1984. Group B streptococcal colonization patterns in mothers and their infants. *J. Clin. Microbiol.* 20:438-440.
- Lim, D.V., W.J. Morales, S. Washington, and A.F. Walsh. 1985. Reduction of morbidity and mortality rates of neonatal group B streptococcal disease through early, rapid diagnosis and prophylactic chemotherapy. *Recent Adv. in Chemother.*, p. 2145-2146.
- Lim, D.V., W.J. Morales, A.F. Walsh, and D. Kazanis. 1986. Reduction of morbidity and mortality rates of neonatal group B streptococcal disease through early diagnosis and chemoprophylaxis. *J. Clin. Microbiol.* 23: 489-492.
- Morales, W.J., D.V. Lim, and A.F. Walsh. 1986. Prevention of neonatal group B streptococcal sepsis by the use of a rapid screening test and selective intrapartum chemoprophylaxis. *Am. J. Obstet. Gynecol.* 155:979-983.
- Lim, D.V., W.J. Morales, and A. Walsh. 1987. Lim Group B Strep Broth and coagglutination for rapid identification of group B streptococci in preterm pregnant women. *J. Clin. Microbiol.* 25:452-453.
- Morales, W.J. and D.V. Lim. 1987. Reduction of group B streptococcal maternal and neonatal infections in preterm pregnancies with preterm rupture of membranes through a rapid identification test. *Am. J. Obstet. Gynecol.* 157:13-16.
- Alberts, V.A., S.S. Khan, D.V. Lim, and D. Te Strake. 1989. Extracellular enzyme activity of some Saprolegniales from a Florida estuary. *Mycologia.* 81:460-463.
- McGarey, D.J., T. Kraxberger-Beatty,** V.A. Alberts, D. Te Strake, and D.V. Lim. 1990. Investigations of potential microbial pathogens associated with ulcerative disease syndrome (UDS) of Florida fish. *In* F.O. Perkins and T.C. Cheng (ed.) *Pathology in Marine Science*, p. 65-75. Academic Press, New York.
- Kraxberger-Beatty, T., D.J. McGarey,** H. Grier, and D.V. Lim. 1990. *Vibrio harveyi*, an opportunistic pathogen of snook, *Centropomus undecimalis*, held in captivity. *J. Fish Dis.* 13:557-560.
- McGarey, D.J., L. Milanese, D.P. Foley, B. Reyes, L.C. Frye,** and D.V. Lim. 1991. The role of motile aeromonads in the fish disease, ulcerative disease syndrome (UDS). *Experientia* 47:441-444.
- Jackson, R.J., K. Gates,** R.J. Sheridan, and D.V. Lim. 1993. Degradation of collagen fibrils by group B streptococci. *Curr. Microbiol.* 26:141-145.

RESEARCH PUBLICATIONS (Continued):

- Lim, D.V., **R.J. Jackson**, and **C. Pull-VonGruenigen**. 1993. Purification and assay of bacterial collagenases. *J. Microbiol. Methods* 18:241-253.
- Jackson, R.J.**, M. Dao, and D.V. Lim. 1994. Cell-associated collagenolytic activity by group B streptococci. *Infect. Immun.* 62:5647-5651.
- Jackson, R.J.**, M. Dao, and D.V. Lim. 1995. Modified FALGPA assay for cell-associated collagenolytic activity. *J. Microbiol. Methods* 21:209-215.
- Leverone, M.R.**, T.C. Owen, F.S. Tieder, G.J. Stewart, and D.V. Lim. 1996. Resting cell dehydrogenase assay measuring a novel water soluble formazan detects catabolic differences among cells. *J. Microbiol. Methods* 25:49-55.
- Morales, A.**, J. Garland, and D.V. Lim. 1996. Survival of potentially pathogenic human-associated bacteria in the rhizosphere of hydroponically-grown wheat. *FEMS Microb. Ecol.* 20:155-162.
- Jackson, R.J.**, D.V. Lim, and M. Dao. 1997. Identification and analysis of a collagenolytic activity in *Streptococcus mutans*. *Curr. Microbiol.* 34:49-54.
- Kalter, C.S., S.S. Dickey, D.V. Lim, and W.F. O'Brien. 1997. Effect of pH on migration of group B *Streptococcus* through human cervical mucus. *Prenat Neonat Med* 2:223-227.
- Rayon, J., J. Carver, L. Wyble, D. Wiener, S. Dickey, V. Benford, L. Chen, and D. Lim. 1997. The fatty acid composition of maternal diet affects lung prostaglandin E₂ levels and survival from group B streptococcal sepsis in neonatal rat pups. *J. Nutr.* 127:1989-1992.
- Ren, X., M.I. Konaklieva, H. Shi, S. Dickey, D.V. Lim, F.J. Gonzalez, and E. Turos. 1998. Studies on non-conventionally fused bicyclic beta-lactams. *J. Org. Chem.* 63:8898-8917.
- DeMarco, D.R.**, E.W. Saaski, D.A. McCrae, and D.V. Lim. 1999. Rapid detection of *Escherichia coli* O157:H7 in ground beef using a fiber optic biosensor. *J. Food Protection* 62:711-716.
- Morales, W.J., S.S. Dickey, P. Bornick, and D.V. Lim. 1999. Change in antibiotic resistance of group B *Streptococcus*: impact on intrapartum management. *Am. J. Obstet. Gynecol.* 181:310-314.
- Turos, E., M.I. Konaklieve, R. Ren, H. Shi, J. Gonzalez, S. Dickey, and D.V. Lim. 2000. N-thiolated bicyclic and monocyclic beta-lactams. *Tetrahedron.* 56:5571-5578.
- Lim, D.V. 2000. Rapid pathogen detection in the new millennium. *NFPA Journal.* 2:13-17.
- Lim, D.V. 2001. Rapid biosensor detection of foodborne microbial pathogens. *Microbiological Methods Forum Newsletter* 18:13-17.

RESEARCH PUBLICATIONS (Continued):

- Tims, T.B., S.S. Dickey, D.R. DeMarco, and D.V. Lim.** 2001. Detection of low levels of *Listeria monocytogenes* within 20 hours using an evanescent wave biosensor. *Am. Clin. Labor.* 20:28-29.
- DeMarco, D.R. and D.V. Lim.** 2001. Direct detection of *Escherichia coli* O157:H7 in unpasteurized apple juice with an evanescent wave biosensor. *J. Rapid Methods and Automation in Microbiology* 9:241-257.
- DeMarco, D.R. and D.V. Lim.** 2002. Detection of *Escherichia coli* O157:H7 in 10- and 25-gram ground beef samples using an evanescent wave biosensor with silica and polystyrene waveguides. *J. Food Protection* 65:596-602.
- Kramer, M.F., T.B. Tims, D.R. DeMarco, and D.V. Lim.** 2002. Recovery of *Escherichia coli* O157:H7 from optical waveguides used for rapid biosensor detection. *J. Rapid Methods and Automation in Microbiology* 10:93-106.
- Turos, E., T.E. Long, M.I. Konaklieva, C. Coates, J-Y. Shim, S. Dickey, D.V. Lim, and A. Cannons.** 2002. *N*-Thiolated β -Lactams: Novel antimicrobial agents for methicillin-resistant *Staphylococcus aureus*. *Bioorg Med Chem Letts* 12:2229-2231.
- Coates, C., T.E. Long, E. Turos, S. Dickey, and D.V. Lim.** 2003. *N*-Thiolated β -lactam antibacterials: Defining the role of unsaturation in the C4 side chain. *Bioorg Med Chem* 11:193-196.
- Lim, Daniel V.** 2003. Real time/near real time detection of bioterrorism agents. *Biodetection Technologies: Identification Innovations and Strategies*, pp. 117-136. Knowledge Press, Brookline, MA.
- Long, T.E., E. Turos, M.I. Konaklieva, A. L. Blum, A. Amry, E.A. Baker, L.S. Suwandi, M.D. McCain, M.F. Rahman, S. Dickey, and D.V. Lim.** 2003. Effect of aryl ring fluorination on the antibacterial properties of C₄ aryl-substituted *N*-methylthio β -Lactams. *Bioorg Med Chem* 11:1859-1863.
- Lim, D.V.** 2003. Detection of microorganisms and toxins with evanescent wave, fiber optic biosensors. *Proc. IEEE* 91: 902-907.
- Tims, T.B. and D.V. Lim.** 2003. Confirmation of viable *E. coli* O157:H7 by enrichment and PCR after rapid biosensor detection. *J. Microbiol. Methods* 55:141-147.
- Harwood, V.J., N.C. Delahoya, R.M. Ulrich, M.F. Kramer, J.E. Whitlock, J.R. Garey, and D.V. Lim.** 2004. Molecular confirmation of *Enterococcus faecalis* and *E. faecium* from clinical, fecal and environmental sources. *Letts. Appl. Microbiol.* 38:476-482.

RESEARCH PUBLICATIONS (Continued):

- Kramer, M.F. and D.V. Lim. 2004. A rapid and automated fiber optic-based biosensor assay for the detection of *Salmonella* in spent irrigation water used in the sprouting of sprout seeds. *J. Food Protection* 67:46-52.
- Donaldson, K.A., M.F. Kramer, and D.V. Lim. 2004. A rapid detection method for Vaccinia virus, the surrogate for smallpox virus. *Biosensors and Bioelectronics* 20:322-327.
- Tims, T.B. and D.V. Lim. 2004. Rapid detection of *Bacillus anthracis* spores directly from powders with an evanescent wave fiber-optic biosensor. *J. Microbiol. Methods* 59:127-130.
- Nyquist-Battie, C., L.E. Frank, D. Lund, and D.V. Lim. 2004. Optimization of a fluorescence sandwich enzyme-linked immunosorbent assay for detection of *Escherichia coli* O157:H7 in apple juice. *J. Food Protection* 67:2756-2759.
- Lian, W., S.A. Litherland, H. Badrane, W. Tang, D. Wu, H.V. Baker, P.A. Gulig, D.V. Lim, and S. Jin. 2004. Ultra-sensitive detection of biomolecules with fluorescent dye-doped nanoparticles. *Anal. Biochem.* 334:135-144.
- Simpson, J.M. and D.V. Lim. 2005. Rapid PCR confirmation of *E. coli* O157:H7 after evanescent wave fiber optic biosensor detection. *Biosensors and Bioelectronics* 21:881-887
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- Kramer, M.F., **T.B. Tims, D.R. DeMarco**, and D.V. Lim. 2002. Recovery of *Escherichia coli* O157:H7 from fiber optic waveguides used for rapid detection. Abstr. Ann. Meeting ASM, p. 369.
- DeMarco, D.R., T.B. Tims**, and D.V. Lim. 2002. Biosensor detection and recovery of *Escherichia coli* O157:H7 from human fecal samples. Abstr. Ann. Meeting ASM, p.134.
- de Groh, E.D.**, M.A. Psiaki, V.J. Harwood, and D.V. Lim. 2002. Sensitivity and specificity of *Escherichia coli* O157:H7 detection in untreated wastewater using an evanescent wave biosensor. Abstr. Ann. Meeting ASM, p.432.
- Varkey, S.**, A.C. Cannons, and D.V. Lim. 2002. Enhanced detection of DNA fragments with an evanescent wave biosensor using a signal amplification system. Abstr. Ann. Meeting ASM, p.145.
- Trindade, T.**, M.F. Kramer, and D.V. Lim. 2002. Antibody-based detection of fecal enterococci utilizing an evanescent wave fiber optic biosensor. Abstr. Ann. Meeting ASM, p. 437.
- Dickey, S.S., M.F. Kramer, and D.V. Lim. 2002. Recovery of *Staphylococcus aureus* on surfaces using a swab-rinse technique vs. immersion technique. Abstr. Ann. Meeting ASM, p. 259.
- Delahoya, N.C., M.F. Kramer, J.E. Whitlock, V.J. Harwood, and D.V. Lim. 2002. Survey of *Enterococcus* species from various sources using API 20 Strep and PCR methods for species identification. Abstr. Ann. Meeting ASM, p. 389.
- Donaldson, K.A., M.F. Kramer, and D.V. Lim. 2003. Detection of vaccinia virus, a surrogate of the smallpox virus, from seeded throat culture swabs using a fiber optic biosensor assay. Abstr. Ann. Meeting ASM, p. 182.
- Nyquist-Battie, C., D. Lund, K.A. Kearns, and D.V. Lim. 2003. F(ab')₂ antibody fragments used as secondary antibodies improve detection of *Escherichia coli* O157:H7 in sandwich and non-sandwich enzyme-linked immunoassays (ELISAs) using commercially-available primary antibodies. Abstr. Ann. Meeting ASM, p. 498.
- Kramer, M.F., P.A. Gulig, and D.V. Lim. 2003. A rapid and automated fiber optic-based biosensor assay for the detection of *Salmonella* in spent irrigation water used in the sprouting of sprout seeds. Abstr. Ann. Meeting ASM, p. 500.
- Trindade, T.**, M.F. Kramer, and D.V. Lim. 2003. Antibody-based detection of microbial pathogens and indicator organisms in marine water utilizing an evanescent wave fiber optic biosensor. Abstr. Ann. Meeting ASM, p. 550.
- Kearns, E.A., T.B. Tims, and D.V. Lim. 2003. The effect of chlorine, chloramines and chlorine neutralization on detection of *Escherichia coli* O157:H7 with an antibody-based fiber optic biosensor assay. Abstr. Ann. Meeting ASM, p. 604.

PUBLISHED ABSTRACTS (Continued):

- Bedenbaugh, C.M.,** M.F. Kramer, and D.V. Lim. 2003. A ganglioside-based assay for the detection of cholera toxin utilizing an evanescent wave biosensor. Abstr. Ann. Meeting ASM, p. 650.
- Look, N.I., M.F. Kramer, and D.V. Lim. 2003. Extraction and detection of *Bacillus anthracis* proteins for antigenic recognition of the spores. Abstr. Ann. Meeting ASM, p. 651.
- Bedenbaugh, C.M.,** M.F. Kramer, and D.V. Lim. 2004. A ganglioside-based assay for the detection of cholera toxin in oyster homogenate utilizing an evanescent wave fiber optic biosensor. Abstr. Ann. Meeting ASM, p. 501.
- Donaldson, K.A., N.L. Look, T.B. Tims, and D.V. Lim. 2004. The electronic TasteChip, a flow-through, microchip multi-analyte detection system. A ganglioside-based assay for the detection of cholera toxin in oyster homogenate utilizing an evanescent wave fiber optic biosensor. Abstr. Ann. Meeting ASM, p. 661.
- Kearns, E.A., A. Bissing, T.B. Tims, S. Dickey, and D.V. Lim. 2004. Concentration of *B. subtilis* var. *niger* spores from water followed by detection using a fiber optic biosensor. Abstr. Ann. Meeting ASM, p. 592.
- Kramer, M.F., N.L. Look, and D.V. Lim. 2004. Anti-*Cryptosporidium* oocyst polyclonal antibody utilized in immunoassays detects soluble antigen of *Cryptosporidium parvum* oocysts. Abstr. Ann. Meeting ASM, p. 551.
- Look, N.L., M.F. Kramer, V.A. Luna, and D.V. Lim. 2004. Use of *Bacillus thuringiensis* spore coat proteins for antibody production and rapid biosensor immunoassay development. Abstr. Ann. Meeting ASM, p. 660.
- Nyquist-Battie, C., L. Freeman, D. Lund, and D.V. Lim. 2004. Improvement of sandwich enzyme-linked immunoabsorbent assay detection of *Escherichia coli* O157:H7 in apple juice by the addition of polyvinylpyrrolidone. Abstr. Ann. Meeting ASM, p. 482.
- Trindade, M.T.,** M.F. Kramer, and D.V. Lim. 2004. An evanescent wave fiber optic biosensor for the detection of fecal enterococci in beach water. Abstr. Ann. Meeting ASM, p. 548.
- Bedenbaugh, C.,** M.F. Kramer, and D.V. Lim. 2005. A ganglioside-based assay for the detection of cholera toxin in oyster homogenate utilizing an evanescent wave fiber-optic biosensor. Abstr. Ann. Meeting ASM.
- Kearns, E.A., S. Magaña, B. Dodge, A. Levine, R. Sorrells, and D.V. Lim. 2005. Development of a semi-dead end filtration system for concentration of bacterial spores from drinking water. Abstr. Ann. Meeting ASM.
- Kramer, M.F. and D.V. Lim. 2005. Use of LPS-binding peptides for capture of gram negative bacteria in rapid detection of gram-negative bacteria using a fiber-optic biosensor. Abstr. Ann. Meeting ASM.

PUBLISHED ABSTRACTS (Continued):

- Magaña, S., E.A. Kearns, D.V. Lim, A.K. Bailey, M.V. Tesone, and T.A. Postlethwaite. 2005. Development of rapid biosensor assays to detect *B. globigii* and *E. coli* O157:H7 using an automated array biosensor. Abstr. Ann. Meeting ASM.
- Simpson, J.M. and D.V. Lim. 2005. Rapid PCR confirmation of *E. coli* O157:H7 after evanescent wave fiber optic biosensor detection. Abstr. Ann. Meeting ASM.
- Trindade, M.T.**, M.F. Kramer, and D.V. Lim. 2005. An evanescent wave fiber optic biosensor for the detection of fecal enterococci in beach water. Abstr. Ann. Meeting ASM.
- Lian, W., D.V. Lim, and S. Jin. 2005. Sensitive detection of pathogens and toxins using fluorescent nanoparticles in a microarray format. Abstr. Ann. Meeting ASM.
- Lund, D., C. Nyquist-Battie, M.F. Kramer, and D.V. Lim. 2005. Isolation of anti-cholera toxin single chain Fv (scFv) antibody fragments from Tomlinson libraries using phage display followed by expression in *Escherichia coli* HB2151 cells. Abstr. Ann. Meeting ASM.
- Freeman, L., C. Nyquist-Battie, D. Lund, and D.V. Lim. 2005. Effect of chlorine disinfectant on antibody-based detection of *Escherichia coli* O157:H7. Abstr. Ann. Meeting ASM.
- Denton, K.A.** and D.V. Lim. 2006. Rapid detection of *Mycobacterium tuberculosis* using a fiber optic biosensor. Abstr. Ann. Meeting ASM.
- Kearns, E.A., S. Magaña, T. Postlethwaite, R. Sorrells, and D.V. Lim. 2006. Development of an automated on-line water monitor: field test results. Abstr. Ann. Meeting ASM.
- Kramer, M.F., U. Bläsi, and D.V. Lim. 2006. Use of phage P68 virion associated Protein 17 for detection of whole cells of *Staphylococcus aureus* using enzyme-linked assays. Abstr. Ann. Meeting ASM.
- Mercado, Q.J., M.F. Kramer, and D.V. Lim. 2006. Use of polymyxin B for capture of gram negative bacteria in rapid detection of gram-negative bacteria using a fiber-optic biosensor. Abstr. Ann. Meeting ASM.
- Shehane, S.D., **M.T. Trindade**, D. Wingfield, and D.V. Lim. 2006. Time required for detection of *Enterococcus* spp. in recreational coastal waters - Analyte 2000 biosensor assay versus EPA Method 1600. Abstr. Ann. Meeting ASM.
- Nyquist-Battie, C., D. Lund, and D.V. Lim. 2006. Expression of single-chain variable-fragment (scFv) recombinant antibodies against cholera toxin in an insect cell line. Abstr. Ann. Meeting ASM.

PUBLISHED ABSTRACTS (Continued):

- Nyquist-Battie, C., J-P. S. Soberano, L. Freeman, D. Lund, and D. V. Lim. 2006. Suitability of polyclonal antibodies to the rough mutant *Escherichia coli* J5 for immunoassay-based detection of the fecal indicator, *Escherichia coli*. Abstr. Ann. Meeting ASM.
- Nyquist-Battie, C, J-P.S. Soberano, L. Freeman, K. Leckband, D. Lund, and D.V. Lim. 2006. Screening commercial polyclonal antibodies against the *Escherichia coli* reference collection (ECOR) for use in portable, evanescent wave, fiber-optic biosensors. ASM Biodefense Meeting.
- Kearns, E.A., S. Magaña, and D.V. Lim. 2007. Concentration of *Escherichia coli* O157:H7 from drinking water using an automated concentration system. Abstr. Ann. Meeting ASM.
- Kramer, M.F., U. Bläsi, and D.V. Lim. 2007. Use of phage P68 virion associated protein 17 for detection of whole cells of *Staphylococcus aureus* using biosensor assays. Abstr. Ann. Meeting ASM.
- Leskinen, S.D., V.J. Harwood, and D.V. Lim. 2007. Near real-time detection of enterococci in recreational coastal waters by the Rec DEC-RAPTOR method. Abstr. Ann. Meeting ASM.
- Magaña, S., M.F. Kramer, and D.V. Lim. 2007. Cross-reactivity of *Escherichia coli* O157:H7 antibody with wastewater background flora. Abstr. Ann. Meeting ASM.
- Nyquist-Battie, C., E. Miller, D. Lund, and D. V. Lim. 2007. Production of polyclonal antibodies for the detection of *Salmonella enterica* serovars Typhimurium and Enteritidis using bacterial strains lacking the O antigen of the lipopolysaccharide. Abstr. Ann. Meeting ASM.
- Schlemmer, S.M., M.F. Kramer, C. Nyquist-Battie, and D.V. Lim. 2007. Capture efficiency of gram negative bacteria by polymyxin B sulfate is increased by detergent in biosensor assays. Abstr. Ann. Meeting ASM.
- Thompson, R.** and D.V. Lim. 2008. Bacteriophage P68 Protein 17 as a capture and detection molecule for *Staphylococcus aureus* in biosensor assays. Abstr. Ann. Meeting ASM.
- Schlemmer, S.M., S.D. Leskinen, and D.V. Lim. 2008. Indirect detection of gram negative bacteria by polymyxin B sulfate with a fiber optic biosensor. Abstr. Ann. Meeting ASM.
- Leskinen, S.D. and D.V. Lim. 2008. Rapid assessment of enterococci in southern California recreational water by ultrafiltration concentration coupled to biosensor detection. Abstr. Ann. Meeting ASM.
- Nyquist-Battie, C., D. Lund, J.E. Chu, E. Miller, and D.V. Lim. 2008. Detection of *Vibrio cholerae* using antisera produced by immunization with a synthetic peptide containing the sequence of a surface-exposed region of toxin-coregulated pilus protein A (TcpA). Abstr. Ann. Meeting ASM.

PUBLISHED ABSTRACTS (Continued):

- Hunter, D.M. and D.V. Lim. 2008. Rapid detection and identification of bacterial pathogens using an ATP bioluminescence immunoassay. Abstr. Ann. Meeting ASM.
- Leskinen, S. D., E. A. Kearns and D. V. Lim. 2009. Dead-end hollow fiber ultrafiltration with the automated concentration system for simultaneous recovery of *Bacillus atrophaeus* spores and MS2 bacteriophage directly from chloraminated tap water. Abstr. Ann. Meeting ASM.
- Hunter, D. M., S. D. Leskinen and D. V. Lim. 2009. Detection of waterborne pathogens in concentrated recreational water using an ATP bioluminescence immunoassay coupled to PCR. Abstr. Ann. Meeting ASM.
- Kearns, E. A., S. Leskinen and D. V. Lim. 2009. Characterization of an improved filter for recovery of microorganisms from water using an automated concentration system. Abstr. Ann. Meeting ASM.
- Schlemmer, S. M., S. Magaña, and D. V. Lim. 2009. Method to concentrate and detect: Automated concentration system and lateral flow immunoassays. Abstr. Ann. Meeting ASM.
- Battie, C., C. Ancheta, D. Lund, and D. V. Lim. 2009. Detection of *Vibrio cholerae* O1 using antisera produced by Genomic Antibody Technology using a plasmid containing the sequence of a surface-exposed protein of the toxin-coregulated pilus protein A (TcpA). Abstr. Ann. Meeting ASM.
- Hunter, D.M., S. D. Leskinen and D. V. Lim. 2010. ATP bioluminescence immunoassay detection and PCR confirmation of *E. coli* O157:H7 in concentrated recreational water. Abstr. Ann. Meeting ASM.
- Kearns, E. A., S.D. Leskinen and D. V. Lim. 2010. Automated dead-end hollow fiber ultrafiltration for simultaneous recovery of multiple organisms from tap water. Abstr. Ann. Meeting ASM.
- Leach, K.M., J. M. Stroot, and D. V. Lim. 2010. Comparison of electrochemiluminescence, cytometric bead array, and immunomagnetic separation for detection of *E. coli* O157:H7 on fresh produce. Abstr. Ann. Meeting ASM.
- Leskinen, S. D., E. A. Kearns and D. V. Lim. 2010. Initial field trials of the Automated Concentration System for recovery of fecal indicator bacteria from surface and ground waters of the Tampa Bay Area. Abstr. Ann. Meeting ASM.
- Magaña, S., S.M. Schlemmer, and D.V. Lim. 2010. Method to concentrate and detect pathogens in produce wash: Automated Concentration System, lateral flow immunoassays, and MSD PR2 1500. Abstr. Ann. Meeting ASM.
- Schlemmer, S.M., K. Leach, S. Magaña, and D.V. Lim. 2010. Optimizing *E. coli* O157:H7 detection on lateral flow immunoassays using concentration and immunomagnetic separation. Abstr. Ann. Meeting ASM.

PUBLISHED ABSTRACTS (Continued):

- Schlemmer, S.M., S. Magaña, and D.V. Lim. 2011. Dispersal of *Bacillus* spore clumps to improve accuracy of spore counts for use in detection systems. Abstr. Ann. Meeting ASM.
- Hunter, D.M. and D.V. Lim. 2011. Evaluation of an IMS/ATP assay for detection of *Staphylococcus aureus* in blood. Abstr. Ann. Meeting ASM.
- Leskinen, S.D., E.A. Kearns, W.L. Jones, C.R. Bevitas, R.L. Brigmon, and D.V. Lim. 2011. Automated dead-end ultrafiltration for enhanced surveillance of *Legionella pneumophila* in cooling tower waters. Abstr. Ann. Meeting ASM.
- Magaña, S., J. Figueroa, R. Schlaf, and D.V. Lim. 2011. A new improved fabrication technique of immunoassay waveguides for the detection of *E. coli* O157:H7. Abstr. Ann. Meeting ASM.
- Hunter, D.M. and D.V. Lim. 2012. IMS/ATP isolation and detection of Gram-positive organisms in blood with PCR confirmation of *Staphylococcus aureus*/MRSA. Abstr. Ann. Meeting ASM.
- Leskinen, S.D., E.A. Kearns, S. Deshpande, D.A. Cremers, R.A. Multari, and D.V. Lim. 2012. Evaluation of two methods for non-targeted detection of bacteria. Abstr. Ann. Meeting ASM.
- Magaña, S., S.M. Schlemmer, and D.V. Lim. 2012. Method to concentrate and detect *E. coli* O157:H7 in high organic load lettuce wash. Abstr. Ann. Meeting ASM.
- Leskinen, S.D., D.W. Hamilton, E.A. Kearns and D.V. Lim. 2013. Sample preparation methodologies for generation of bacterial peptides from cultures and environmental samples for ESI LC-MS/MS analysis. Abstr. Ann. Meeting ASM.
- Kirs, M., E. Kearns, S. Magaña, D.V. Lim, and R.S. Fujioka. 2014. Detection and quantification of microorganisms in recreational and potable water in Hawaii by high-volume ultrafiltration method. Abstr. AWWA Water Quality Technology Conference.
- Brigmon, R.L., D. Kaplan, W. Jones, H. Brant, C. Milliken, S. Leskinen, E.A. Kearns, and D.V. Lim. 2015. Application of cooling towers to collection and concentrate constituents of concern. Gordon Research Conference on Chemical and Biological Terrorism Defense.
- Kirs, M., E.A. Kearns, S.M. Castillo, D.V. Lim, and R.S. Fujioka. 2015. High-volume ultrafiltration: going beyond indicator bacteria. Water Resource Sustainability Issues on Tropical Islands Conference.
- Gustafson, R., S. Magana, E.A. Kearns, D.V. Lim, and E. Ryser. 2017. Rapid concentration/detection of *E. coli* O157:H7 and *Listeria monocytogenes* from lettuce wash water in commercial scale facilities. IAFP Annual Meeting.

GRADUATE STUDENTS AND THESES (Current/most recent positions):

- Edward C. Pombier (M.S., 1979) - Relationship between serum resistance and auxotrophy in *Neisseria gonorrhoeae* (Director, Radiation Control Center, University of Miami)
- Richard A. Recckio (M.S., 1979) - Growth of *Neisseria gonorrhoeae* in a chemostat (Microbiologist, Anheuser Busch/Houston)
- Trevor Wall (M.S., 1980) - Mouse virulence of group B streptococci (Senior Regulatory Affairs Manager, Abbott/Cerus Corporation)
- Bruce Caldwell (M.S., 1980) - The effects of oxygen concentration on neuraminidase production by type III group B streptococci (Osteopath)
- Harriet Mathews (M.S., 1981) - Effect of penicillin G on neuraminidase activity by group B streptococci (Faculty, Pasco-Hernando Community College)
- Walter L. Rigling (M.S., 1982) - Phagocytosis of group B streptococci by murine macrophages (teacher)
- Mary E. Peterson (M.S., 1983) - Effect of pH, salinity, and temperature on the growth and toxin production of non-01 *Vibrio cholerae* in a defined medium (Microbiologist, Dynamac/Kennedy Space Center)
- Douglas E. Jones (M.S., 1983) - Magnitudes of colonization of group B streptococci in mothers and infants (Microbiologist, Chastain Skillman, Inc.)
- Elaine M. Jimenez (M.S., 1985) - Effects of vancomycin and human serum on growth and survival of penicillinase-producing and non-penicillinase-producing *Neisseria gonorrhoeae* (Teacher, Tampa Catholic)
- Kelly C. Burke (M.S., 1985) - Antibody titers in colostrum of maternity patients colonized with group B streptococci (Faculty, College of the Canyons, Santa Clarita, CA)
- Lynnette Chakkaphak (M.S., 1985) - The auxotrophic and growth requirements of group B streptococci (System Director, Laboratory and Imaging at St. Vincent's HealthCare)
- Brian F. Colquhoun (M.S., 1986) - Antibody titers in sera of mothers and infants colonized with group B streptococci (DVM, private practice)
- Laila Mozdab (M.S., 1986) - Effect of carbon dioxide on the growth and metabolism of group B streptococci (Physician)
- Melissa Jackson Bacic (M.S., 1987) - Amniotic fluid and growth of group B streptococci (Postdoctoral Fellow, East Carolina University School of Medicine)
- Teresa (Kraxberger-Beatty) Fischer (M.S., 1988) - The isolation, identification, and characterization of bacteria from ulcerative fish from the St. Johns River system (Associate Professor, Indian River State College; retired)
- Jose Chipollini (M.S., 1988) - Collagenase production by group B streptococci (Director of Food Safety and QA at CCF Brands, LLC)

GRADUATE STUDENTS AND THESES (Continued):

- Mia L. Anthony (M.S., 1990) - An accelerated procedure for the detection of *Salmonella* and *Shigella* (Microbiologist/Pharmacologist, Sanofi Winthrop)
- Bobbi S. Werner (M.S., 1990) - The development of a rapid isolation, enrichment, and identification scheme for *Listeria* (Head of Global Regulatory Affairs, Galderma Research & Development; President/Principal Consultant, Drais Regulatory Consulting LLC)
- Donald J. McGarey (Ph.D., 1991) - The role of aeromonads in ulcerative disease syndrome and the development of serological methods for the rapid detection of S-layer proteins on *Aeromonas* (Dean, School of Pure and Applied Sciences, Florida SouthWestern State College)
- Lori Milanese (M.S., 1991) - Virulence factors of *Aeromonas* (Chief Microbiologist, Walt Disney World)
- Erica Kincaid (M.S., 1992) - Factors influencing collagenase production in group B streptococci (Microbiologist, Procter & Gamble)
- Christine Strom (M.S., 1992) - The partial purification of collagenolytic enzyme from group B *Streptococcus* (Microbiologist, Tropicana)
- Christine Pull (M.S., 1994) - Detection and analysis of cell-associated caseinase from group B streptococci (Dentist)
- Lorraine Cho-Chung-Hing (M.S., 1995) - Investigation of a potential collagenase gene in group B *Streptococcus* (Physician)
- Anabelle Morales (M.S., 1995) - Survival of potentially pathogenic human-associated bacteria in the rhizosphere of hydroponically-grown wheat (Vice President of Quality Assurance and Food Safety, Brad's Raw Chips, LLC)
- Rosalind Jackson (Ph.D., 1996) - Collagenolytic activity by group B streptococci and its association with degradation of amniotic collagen fibrils (Research Associate, H. Lee Moffitt Cancer Center and Research Institute; deceased)
- Marianne (Leverone) Kramer (Ph.D., 1996) - Fatty acid oxidation in *Pseudomonas* and partial DNA sequence of acyl-CoA synthetase in *Pseudomonas aeruginosa* PAK (Assistant Professor, East Tennessee State University)
- Gregory Rushing (M.S., 1997) - Purification and characterization of collagenase from group B *Streptococcus* (Physician)
- Bridgette Berryhill (M.S., 1997) - Construction of a group B *Streptococcus* genomic library and probing for a potential collagenase gene (Research Associate, Shriners Hospital for Crippled Children)
- Lisa LeHoullier (M.S. 1998) - Induction of a potential collagenase in group B *Streptococcus* (Instructor, University of Tampa)
- Matthew Morrow (M.S. 1998) - An evaluation of the use of flow cytometry to rapidly detect group B *Streptococcus* (Director of Flow Cytometry, USF Children's Research Institute)
- Matthew Coakley (M.S. 1998) - Purification of a collagenase from group B *Streptococcus* (District Sales Manager, Medtronic)

GRADUATE STUDENTS AND THESES (Continued):

- Raymond Kurz (Ph.D. 1998) - Removal of microbial indicators from stormwater using sand filtration, wet detention, and alum treatment best management practices (Environmental scientist, Ayres Associates, Inc.)
- Crystal Ray (M.S. 2000) - Antibiotic resistance genes of group B *Streptococcus* (Teacher)
- Robert Allison (MPH 2000) (Research Assistant, University of South Florida)
- William Rodriguez (M.S. 2001) - Iron requirements of *Streptococcus agalactiae* (Scientist, Sofamor Danek/Gen Surgical Corp)
- Bryan Tims (M.S. 2001) – Rapid detection of *Listeria monocytogenes* with an evanescent wave biosensor (Instructor, Hampden-Sydney College)
- Daniel DeMarco (Ph.D. 2001) – An evanescent wave fiber optic biosensor for the rapid detection of pathogenic bacteria using *E. coli* O157:H7 as a model organism for assay development (Senior Research Scientist, DuPont Corp.)
- Diane Welton (M.P.H. 2001) (Research Assistant, Orange County Water Utilities)
- Theresa Trindade (Ph.D. 2006) – Detection of pathogenic bacteria and fecal enterococci in recreational water with an evanescent wave fiber optic biosensor (Clinical Pharmacist)
- Crystal Bedenbaugh (Ph.D. 2006) – Development of ganglioside-based assays for the identification of botulinum and cholera toxins utilizing an evanescent wave biosensor (Faculty, Southeastern University)
- Kimberly Denton (M.S. 2006) – Rapid detection of *Mycobacterium tuberculosis* in lung tissue using a fiber optic biosensor (Technician, LifeLink)
- Christie McCabe (M.S., 2009) – Binding efficiency of biosensor assays – A novel antibody-based capture matrix utilizing human serum albumin and streptococcal protein G to increase capture efficiency of bacteria

MEDICAL FELLOWS TRAINED IN RESEARCH:

- Craig S. Kalter, M.D., Department of Obstetrics and Gynecology (1994-1995) - Migration of group B *Streptococcus* through cervical mucus
- Jorge Rayon, M.D., Department of Pediatrics (1995-1996) - Nutrition and group B *Streptococcus* infection in neonatal rat pups

POSTDOCTORAL FELLOWS:

- Daniel DeMarco, Ph.D. (2001-2002) (Senior Research Microbiologist, DuPont Corporation)
- Allyson Bissing-Gibson, Ph.D. (2002-2003) (Principal Staff Scientist, Johns Hopkins University Applied Physics Laboratory)
- Kim Donaldson, Ph.D. (2002-2004) (U.S. Customer Service Manager, BioMerieux; retired)
- Eric Callahan, Ph.D. (2004-2005)

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POSTDOCTORAL FELLOWS (continued):

- Marianne F. Kramer, Ph.D. (2000-2007) (Assistant Professor, East Tennessee State University; retired)
Joyce Stroot, Ph.D. (2004-2011) (Microbiologist, Ciris Energy; retired)
Kelly Leach, Ph.D. (2009-2011) (Instructor, Florida Department of Corrections)
Stephaney Leskinen, Ph.D. (2005-2013) (Division Director of Integrative Health and Performance Sciences at UES, Inc.)
Elizabeth Kearns, Ph.D. (2001-2016) (Consultant)

UNDERGRADUATE RESEARCH STUDENTS AND PROJECTS:

- Rosella D. Smith (1977-1978), Project: Growth and metabolism of *Neisseria gonorrhoeae*
Phillip Ruiz (1977), Project: Growth of *Neisseria gonorrhoeae* in a liquid medium
Jill DeVeise (1977), Project: Virulence properties of *Neisseria gonorrhoeae*
Rick Calermo (1978), Project: Growth of *Neisseria gonorrhoeae*
Debra Rodriguiz (1978), Project: Inhibition of hemolytic streptococci
Susan D. Day (1978), Project: Growth of streptococci in different media
Michael Kamboureli (1978), Project: Growth of *Neisseria gonorrhoeae*
Russell Graham (1978), Project: Penicillinase activity in *Neisseria gonorrhoeae*
Mary H. Marnell (1979-1980), Project: Identification of streptococci by co-agglutination
Victor Ciccarelli (1979), Project: Growth of streptococci
Richard Silverberg (1979), Project: Growth of bacteria
Lloyd West (1979-1980), Project: Effect of incubation conditions on growth of *Neisseria gonorrhoeae*
Pat Krause (1979), Project: Growth of *Neisseria gonorrhoeae* in a liquid medium
Richard Thomas (1980), Project: Virulence factors of *Streptococcus pyogenes*
Shari Goodwin (1980), Project: Growth of bacteria
Deborah Jones (1980), Project: Growth of *Neisseria gonorrhoeae* in defined media
Norma Musson (1980), Project: Virulence properties of bacteria
Teresa Kraxberger Beatty (1981), Project: Penicillin resistance of *Streptococcus agalactiae*
Martin Wells (1981), Project: Virulence properties of bacteria
Joyce Lambert (1981), Project: Rapid growth of bacteria
Lori Ignaszewski (1981), Project: Virulence of *Streptococcus agalactiae* in mice
Elizabeth Friedl Jones (1981), Project: Identification of streptococci by co-agglutination
Mark Fowler (1982), Project: Growth and survival of *Neisseria gonorrhoeae*
Caryn Lobel (1982), Project: Rapid identification of *Streptococcus agalactiae*
Charles Gibson (1982), Project: Biochemical characteristics of pathogenic bacteria
Helen Bullock (1982), Project: Virulence factors of *Vibrio*
Cheryl Johnson (1982-1983), Project: Auxotrophic growth requirements of *Neisseria gonorrhoeae*
Diane Normandin (1982), Project: Transport of *Neisseria gonorrhoeae*
Tomas Gacio (1982), Project: Analysis of water for pathogenic bacteria
Carla Reeley (1983), Project: Identification of pathogenic bacteria

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UNDERGRADUATE RESEARCH STUDENTS AND PROJECTS (Continued):

- Joy Moritz (1984), Project: Isolation of *Chromobacterium violaceum* from lakes
Sue Hoffman (1984), Project: Isolation of *Chromobacterium violaceum* from lakes
Yolanda Sanchez (1985), Project: Virulence properties of bacteria
Rita T. Sivils (1985-1986), Project: Metabolic pathways of group B streptococci
Sharon Mohammed (1985-1986), Project: Antibiotic resistance of group B streptococci
Karen Newman (1985-1986), Project: Fluorogenic assays for fecal coliforms
William Westra (1985-1986), Project: Fluorogenic assays for fecal coliforms
Susan Lefave (1986), Project: Rapid identification of *Streptococcus agalactiae*
Earl Echon (1986), Project: Fluorogenic assay for bacteria
Kristina Nelson (1986), Project: Microbial pathogens of fish
Orlando Abadia (1986), Project: Microbial pathogens of fish
Lisa Young (1986), Project: Clinical isolates of *Streptococcus agalactiae*
Melany D. Howard (1986), Project: *Neisseria gonorrhoeae* and penicillinase production
Mike Wolfington (1987), Project: Fluorogenic assay for bacteria
Laura Currey (1987), Project: Direct test for identification of *Streptococcus agalactiae*
Lisa Young (1987), Project: Direct test for identification of *Streptococcus agalactiae*
Jennifer Hester (1987), Project: Isolation of pathogenic bacteria from fish
Deborah Greene (1988), Project: Tetrazolium-based assay for identification of bacteria
Mia Anthony (1988), Project: Microbicidal activity of disinfectants
Dayna Glockner (1989), Project: Growth of bacteria in liquid media
Daniel Foley (1989-1990), Project: Identification of *Aeromonas* from fish
Broc Pratt (1992), Project: Rapid identification of *Salmonella* and *Shigella*
Ricardo Gonzalez (1992), Project: Rapid identification of *Salmonella* and *Shigella*
Thomas H. Jennings (1992), Project: Development of collagenase screening assays
Kim Gates (1991-1993), Project: Purification of collagenolytic enzymes from *Streptococcus agalactiae*
Parimal Maniar (1993), Project: Purification of bacterial collagenases
Franceen Tieder (1993-1994), Project: Tetrazolium assay for fatty acid metabolism in *Pseudomonas*
Michelle Plantin (1994, American Cancer Society Summer Fellow), Project: Screening of group B streptococci for collagenase activity
Mary Flaten (1994, Biology Honors Student), Project: Collagen gel assay for group B *Streptococcus*
William Rodriguez (1997), Project: Siderophores produced by group B *Streptococcus*
Son-Hi Scruggs (1998, McNair Scholar), Project: Antibiotic resistance of group B *Streptococcus*

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INVITED TALKS (since 2000):

- Rapid detection of pathogens using a fiber optic biosensor, Florida Public Health Association Annual Meeting, Tampa, FL (July 2000)
- Real time/near real time biosensor detection of microbial pathogens, North Central Association of Food and Drug Officials, Grand Rapids, Michigan (October 2000)
- Bacterial contamination and detection, Nationwide Satellite Transmission, NASA Network and Sunshine Network (December 2000)
- Real time/near real time detection of foodborne pathogens using a fiber optic biosensor, USDA Agricultural Research Service Center, Wyndmoor, Pennsylvania (June 2001)
- Biosensor detection of microbial pathogens, Florida Foodborne Pathogen Analysis Conference, St. Petersburg Beach, Florida (July 2001)
- Rapid biosensor detection of pathogens in food and water, U.S. Army Solider and Biological Chemical Command Food Safety Workshop, Hunt Valley, Maryland (March 2002)
- Real time/near real time biosensor detection of pathogenic microorganisms and toxins in food, water, and the environment, Florida Water Resources Conference, Orlando, Florida (March 2002)
- Real time/near real time biosensor detection of bioterrorism agents, Biodetection Technologies Conference, Alexandria, Maryland (May 2002)
- Behind Closed Doors: So You Want to Become a University Professor, American Society for Microbiology 103rd General Meeting, Washington, DC (May 2003)
- Real time/near real time biosensor detection of pathogenic microorganisms and toxins in water, and the environment, 2002 Pool & Spa Expo, Dallas, Texas (October 2002)
- Real time/near real time biosensor detection of pathogenic microorganisms and toxins in water, American Water Works Water Quality Technology Conference, Seattle, Washington (November 2002)
- Battling bioterrorism with biosensors, Lunch with a Scholar, Tampa, Florida (January 2003)
- Rapid biosensor detection of microbial pathogens/toxins, Consortium of Biological Defense Researchers Meeting, Lubbock, Texas (April 2003)
- Real time/near real time biosensor detection of bioterrorism agents, American Industrial Hygiene Conference and Expo, Dallas, Texas (May 2003)
- Rapid biosensor detection of microbial pathogens, Rapid Microbiological Measurement Methods Conference, Monterey, California (May 2003)
- Battling bioterrorism with biosensors, BioSciences in Florida: Catalysts for Change Conference, Orlando, Florida (October 2003)
- Battling bioterrorism with biosensors, Auburn University, Auburn, Alabama (January 2004)
- Battling bioterrorism with biosensors, Scientists and Engineers Expanding Knowledge Luncheon, Sarasota, Florida (February 2004)
- Battling bioterrorism with biosensors, Division of Infectious Diseases, Tufts University, North Grafton, Massachusetts (February 2004)
- Battling bioterrorism with biosensors, Tampa Bay Chapter of Sigma Xi, Tampa, Florida (March 2004)

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RECENT INVITED TALKS (Continued):

- Insider secrets to academic jobs, American Society for Microbiology 104th General Meeting, New Orleans, Louisiana (May 2004)
- Biosensors battling bacteria and bioterrorism, Discovery Day Keynote Speaker, Hillsborough Community College, Brandon, Florida (April 2005)
- Rapid biosensor detection of waterborne pathogens, BioFlorida/Florida Marine Biotech Summit V, Gainesville, Florida (November 2006)
- Rapid biosensor detection of pathogens, 2006 Florida SBIR/STTR Conference, Tampa, Florida (March 2006)
- Rapid concentration/biosensor detection of pathogens, Florida Research Consortium Annual Tech Transfer Conference, Miami, Florida (May 2007)
- Rapid concentration/biosensor detection of pathogens, Florida Innovation Workshop, Orlando, Florida (March 2008)
- Biosensors, bugs, and biodefense, University of Central Florida, Orlando, Florida (April 2008)
- Sample preparation and assay refinements for pathogen detection platforms, Photonics West, San Jose, California (January 2009)
- Sensor technologies for pathogens and toxins, IAFP Annual Meeting, Anaheim, California (August 2010)
- Integrated rapid sample processing/detection of waterborne and foodborne pathogens, LabAutomation2011, Palm Springs, California (January/February 2011)
- Improving WMD surveillance and detection through concentration. U.S. Defense Threat Reduction Agency, Fort Belvoir, Virginia (August 2012)
- Rapid sample processing/detection of waterborne and foodborne pathogens, Southeastern Branch American Society for Microbiology, Auburn, Alabama (November 2013)
- Other emerging bioscience areas: Sample processing/detection, Army Research Laboratory, Biological Science – Army Science Planning and Strategy Meeting, Fairfax, Virginia (December 2013)
- The value of an innovative system to process large volumes of water (100 l) to detect microbial pathogens in sources of water used for drinking, recreational, re-use, agricultural and food production. Water Resources Research Center, University of Hawaii-Manoa (February 2014) (with E. Kearns and S. Magaña)

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SCIENTIFIC JOURNAL REVIEWER:

Analytical Chemistry

Biosecurity and Bioterrorism

Biosensors and Bioelectronics

Journal of Bionanoscience

AWWA Journal

Journal of Virological Methods

Journal of Food Protection

Journal of Rapid Microbiological Methods

Journal of Microbiological Methods

Optics & Lasers in Engineering

Journal of Agricultural and Food Chemistry

BIOGRAPHICAL SKETCHES:

American Men and Women of Science

The International Who's Who of Contemporary Achievement

Who's Who in Frontier Science and Biotechnology

Who's Who in Medicine and Healthcare

Who's Who in Science and Engineering

Who's Who in American Education

Who's Who among Asian Americans

Who's Who in the South and Southeast

Who's Who in Technology

Who's Who in America

Who's Who in the World

Dictionary of International Biography

Men of Achievement

OTHER:

Inventor, Lim Broth (REMEL, Becton Dickinson Microbiology Systems, PML Microbiologicals, Hardy Diagnostics, Gibson Laboratories) (FDA Gold Standard for Identification of Group B Streptococci and Recommended by the Centers for Disease Control and Prevention)

Co-Inventor (with E.A. Kearns, S.D. Leskinen, and S. Magaña), Portable Multi-Use Automated Concentration System (PMACS), licensed to Intellisense Design

U.S. Patent #6,476,015 (2002), “N-thiolated β -lactam antibiotics” (Co-Inventor)

U.S. Patent # 6,946,458 (2005), “N-thiolated β -lactam: Novel antibacterial agents for methicillin-resistant *Staphylococcus aureus*” (Co-Inventor)

U.S. Patent #7,759,639 (2010), “Directly coating biological molecules on glass surfaces using electrospray” (Co-Inventor)

U.S. Patent #8,518,658 (2013), “ATP bioluminescence immunoassay” (Co-Inventor)

U.S. Patent #9,116,151 (2015), “Detection plate for ATP bioluminescence immunoassay and method of manufacturing” (Co-Inventor)

U.S. Patent #9,714,943 (2017), “Materials and methods for capture antibody targeted fluorescent in-situ hybridization (CAT-FISH)” (Co-Inventor)

Author, *Microbiology*, West Publishing Company (1989)

Author, *Microbiology*, Second Edition, Wm. C. Brown/McGraw-Hill (1998)

Author, *Microbiology*, Third Edition, Kendall/Hunt (2003)

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OTHER (Continued):

Co-Author, Introduction to Microbiology Laboratory Manual, Contemporary Publishing Co (1995)

Author, "Microbiology" in Encyclopedia of Life Sciences, Macmillan (2000)

CDC Task Force on Preparedness and Response to Foodborne Bioterrorism (2001)

Army Research Laboratory, Biological Science – Army Science Planning and Strategy Meeting
(2013)

USF Chapter, National Academy of Inventors, Charter Member

President, Micro Concepts Research Corporation (1986-2016)

Expert/Consultant for various law firms (1984-)

RESEARCH INTERESTS:

Pathogenic microbiology, molecular biology, diagnostic microbiology, environmental microbiology, food and water microbiology; virulence mechanisms in pathogenic bacteria; probing and cloning of virulence genes; development of procedures for sample processing and rapid identification of bacteria; biosensors.