

Kate von Lackum, D.M.D., Ph.D.

Nancy Katherine von Lackum, D.M.D., PhD
Lexington Periodontics and Implant Dentistry, PLLC
Cell Phone: (859) 629-1042 E-mail: kvonlack@gmail.com Fax: (859) 687-0470
Business Mailing Address: P.O. Box 22100, Lexington, Kentucky 40522-2100

LICENSURE

- State of Kentucky Board of Dentistry conferred Anesthesia License: September, 2013.
- State of Kentucky Board of Dentistry conferred Periodontics Specialty License: July, 2013.
- State of Kentucky Board of Dentistry conferred Kentucky General Dentistry License: August, 2011.
- State of Florida Department of Health conferred Florida Dental License: June 22, 2010.
- American Heart Association conferred Advanced Cardiac Life Support Provider (6/2014) and Basic Life Support, (6/2015)

PRIVATE PRACTICE EXPERIENCE:

Periodontist, Associate, Perimeter Periodontics, 620 Perimeter Drive, Suite 103, Lexington, Kentucky 40517. Phone (859) 268-1596. August 1, 2013 – February 3, 2014

General Dentist, Nova Dental Group, 1569 N. Nova Road, Holly Hill, FL 32117. Phone (386) 257-6518. December 2012 – May, 2013.

EDUCATION

University of Florida, College of Dentistry; School of Advanced Dental Sciences: Department of Periodontics, Gainesville, FL.

- Certificate of Training, Periodontics, June 28, 2013.

University of Florida, College of Dentistry, Gainesville, FL.

- Doctor of Dental Medicine, May 2010.

University of Kentucky, College of Medicine; Department of Microbiology, Immunology and Molecular Genetics, Lexington, KY.

- Doctor of Philosophy in Microbiology, April 2006.
Dissertation Title: Regulation of Proteins Important To the Mammal-Tick Infectious Cycle of the Lyme Disease Spirochete, *Borrelia burgdorferi*. Mentor: Brian Stevenson, Ph.D.

Hanover College, Hanover, IN.

- Bachelor of Arts in Biology, May 2000

PERIODONTICS TEACHING EXPERIENCE

- **Part-time faculty, D.M.D. Program, University of Kentucky College of Dentistry, Department of Periodontics**, Clinical Instructor every Wednesday. (January 8, 2014 – present).
- **Local Anesthesia Hygienist Certification Program Instructor**, UFCD. Human anatomy and dental local anesthesia technique instruction (2012-2013).
- **UFCD General Dentistry Clinic Periodontics Clinical Instructor**, weekly clinical instruction with undergraduate dental students. (2010 – 2013).

EXTRAMURAL/CONTINUING EDUCATION

Pikos Implant Institute, Palm Harbor, Florida

- Advanced Bone Grafting course. November 8-10, 2012

The Pankey Institute for Advanced Dental Education, Key Biscayne, Florida

- Essentials 1-Creating the Exceptional Dental Practice, The New Patient Experience. October 24-28, 2012

Misch International Implant Institute, Orlando, Florida

- 119 hours of implant education (lecture/participation in hands-on workshops) Misch Surgical Program
- February 3-5, 2012; March 20-21, 2012; May 18-20, 2012; July 13-15, 2012; September 14-16, 2012

The Ohio State University, Columbus, OH.

- Continuing Education for Dissertation research. Met-Vet Acarology Summer Program, June 28-July 9, 2004

PROFESSIONAL/UNIVERSITY LEADERSHIP EXPERIENCE

- **UF Graduate Student Council** (2012-2013). Graduate student liaison representing the School of Advanced Dental Sciences for the University of Florida Graduate Student Council.
- **School of Advanced Dental Sciences (SADS) Student Advisory Board**, UFCD (2012-2013). Graduate student representative to committee governing SADS curriculum, program requirements and graduate dental education.
- **American Academy of Periodontology Foundation Liaison**, UFCD (2011-2013)
- **Dental Class Vice President**, UFCD. (2006 – present) – student representative for DMD program review meetings with UFCD Dean Teresa A. Dolan, worked in coordination with the Office of Education to provide curriculum review sessions and planned new student welcoming committee and event for the Class of 2011.
- **Recruitment Chair**, Alpha Omega Dental Fraternity (2008 – 2009), Participated in AO Leadership Conference, Ft. Lauderdale, FL (5/2009)
- **Elected Council**, UFCD Student Research Group (2006 – 2010)
- **Research Representative**, UFCD Student **ADEA**, (2006 – 2008)
- **Chair, Graduate Student Council**, UK (2002 – 04); student rep (2000-04)
- **Emerging Leaders Workshop** participant, Hanover College, (Fall 1998)
- **President** (1998-2000), **Liaison to Madison Chapter** (1998-2000), **Treasurer** (1996-1998): Habitat for Humanity, Hanover College Campus Chapter
- **Pledge Educator** and **Executive Committee Officer**, Phi Mu Sorority, Hanover College, 1998-2000

UNIVERSITY SERVICE

- **Graduate Student Representative** to the Graduate School Student Council, UF (2012-2013)
- **Accreditation Research ad hoc Committee Student Representative**, UFCD (2007 – 2008)
- **Student Speaker**, UFCD White Coat Professional Ceremony (5/2006)
- **Graduate Student Representative** to the Graduate School Student Council, UK (2001-2002)
- **Student Representative**, Integrated Biomedical Studies Student Council, UK (2000-2001)

TEACHING EXPERIENCE

- Course Instructor, UK, Adventures in Learning Programs in Science (ALPS), Summer Program in Microbiology: a lab and seminar intensive course for high school students from Montgomery County, KY (June 2004)
- Teaching Assistant and Lecturer, UK, MI 595 Immunology Lab course for undergraduate students (Fall 2002)
- Teaching Assistant, Hanover College, BIO 115 and 120J Freshman Biology Lab courses (1999-2000)

COMMUNITY SERVICE

- **Mission Lexington** (August, 2013 - present), Periodontal clinical services pro bono
- **Dental Mission Trip, Yucatán Peninsula** (2009), 10-day mission trip to provide free dental care and education to multiple communities in Merida, Mexico.
- **Special Olympics**, oral disease screening volunteer for Special Olympics athletes, assisted in diagnosing oral disease and assessing DMFS in a special needs population (2006-2011).
- **Oral Cancer Awareness Week Examiner**, Performed free oral cancer screenings (2009-2010).

AWARDS AND HONORS

- **Finalist for the Dr. and Mrs. Gerald M. Kramer Scholar Award for Excellence through the American Academy of Periodontology Foundation.** Finalists selected on the basis of personal motivation for excellence in character, academic achievement, leadership, community involvement, and demonstration of their concern for others. AAP Annual Meeting, Philadelphia 2013.

- **Fellowship status in The International Congress of Oral Implantologists (ICOI) awarded 9/2012.** The ICOI is a tax-exempt, non-profit, worldwide dental educational organization. Fellowship status is achieved through demonstration of dental implant education, research, and clinical experience.
- **American Academy of Periodontology Award for Outstanding Achievement in Periodontics,** UFCD (May 2010)
- **International Congress of Oral Implantologists Pre-Doctoral Achievement Award,** in recognition of interest and commitment to oral implantology and implant dentistry, (May 2010).
- **International College of Dentists, Award for Best Ethical Problems and Solutions in Dentistry Essay competition** (May, 2010)
- **Academy of Alumni and Friends Scholarship,** UFCD. Scholarship towards dental education tuition(2006 – 2007)
- NIH Institute Training Grant T32CA09509, UK, included graduate stipend and full tuition (8/2000-7/2001)
- **Research Challenge Trust Fund Recipient,** UK (8/2001-7/2002)
- NIH Award: **National Research Service Award,** UK, academically competitive award that included graduate stipend, full tuition, and travel grant (8/2002-7/2003)
- NIH Training Grant T32AI49795, UK: Training program in microbial pathogenesis, included graduate stipend, full tuition, and travel grant (8/2003-7/2005)
- Sponsored Membership in **American Association for the Advancement of Science (AAAS)** funded by AAAS/*Science* Program for Excellence in Science (10/2004-present)
- **Hendricks Scholarship,** Hanover College – academically competitive scholarship (1999 – 2000)
- **Tri Beta Biology Honorary Society Member** (8/1998-5/2000)

PROFESSIONAL SOCIETY MEMBERSHIPS

- American Academy of Periodontology (2010 – present)
- American Academy of Osseointegration (2013)
- International Congress of Oral Implantologists, Fellow (2012 – present)
- Florida Association of Periodontists (2010 – present)
- America Dental Education Association (2006 – present)
- American Student Dental Association (2006-2007 & 2009-present)
- American Association for the Advancement of Science - awarded sponsored membership (2004-present)

SEMINARS

- Strategies for Management of Complications Associated with Maxillary Sinus Augmentation. Florida Association of Periodontists. (February 8, 2013).
- **Invited Speaker:** Hanover College, Cell Biology Class, Hanover, IN. “Regulation of virulence proteins of the Lyme disease spirochete, *Borrelia burgdorferi*, during the mammal-tick infection cycle.” (March 14, 2006)
- **Invited Speaker:** Hanover College, Tri-Beta Biology Club. Hanover, IN. “Life as a graduate student.” (March 13, 2006)
- **Invited Speaker:** UF, Department of Oral Biology, Gainesville, FL. Regulation of virulence proteins of the Lyme disease spirochete, *Borrelia burgdorferi*, during the mammal-tick infection cycle. (December 14, 2005)
- Regulation of Proteins Important To the Mammal-Tick Infectious Cycle of the Lyme Disease Spirochete, *Borrelia burgdorferi*. UK (April 12, 2006) Ph. D. Defense Seminar.
- Langerhans cells take a back seat to dermal dendritic cells in activating T cell mediated defenses against Herpes Simplex Virus. UK (November 14, 2004)
- Quorum sensing in *Borrelia burgdorferi*: regulated protein expression. UK (April 22, 2003)
- Development of genetic tools for the study of *Leptospira*. UK (September 14, 2001)

PERIODONTICS RESEARCH EXPERIENCE

- **UF Department of Oral Biology and Center for Molecular Microbiology** (5/06 – 2008);
Mentor: Martin Handfield, Ph.D. **-First Author:** “The Degree of Microbiome Complexity Influences the Epithelial Response to Infection.” Accepted and under editing for BMC Genomics. Part-time post-doctoral research project under the supervision of Dr. Handfield.

PUBLICATIONS

Peer-Reviewed Journal Articles:

- Mans JJ, **von Lackum K**, Dorsey C, Willis S, Wallet SM, Baker HV, Lamont RJ, Handfield M. The Degree of Microbiome Complexity Influences the Epithelial Response to Infection. BMC Genomics. 2009 Aug 18;10:380.
- Riley SP, Bykowski T, Babb K, **von Lackum K**, Stevenson B. Genetic and physiological characterization of the *Borrelia burgdorferi* ORF BB0374-pfs-metK-luxS operon. Microbiology. 2007 Jul;153(Pt 7):2304-11.
- **von Lackum K**, Ollison KM, Bykowski T, Nowalk AJ, Hughes JL, Carroll JA, Zückert WR, Stevenson B. Regulated synthesis of the *Borrelia burgdorferi* inner-membrane lipoprotein IpLA7 (P22, P22-A) during the Lyme disease spirochaete's mammal-tick infectious cycle. Microbiology. 2007 May;153(Pt 5):1361-71.
- Bykowski T, Babb K, **von Lackum K**, Riley SP, Norris SJ, Stevenson B. Transcriptional regulation of the *Borrelia burgdorferi* antigenically variable VlsE surface protein. J Bacteriol. 2006 Jul;188(13):4879-89.
- Miller JC, **von Lackum K**, Woodman ME, Stevenson B. Detection of *Borrelia burgdorferi* gene expression during mammalian infection using transcriptional fusions that produce green fluorescent protein. Microb Pathog. 2006 Jul;41(1):43-7. Epub 2006 May 24.
- **von Lackum K**, Babb K, Riley SP, Wattier RL, Bykowski T, Stevenson B. Functionality of *Borrelia burgdorferi* LuxS: the Lyme disease spirochete produces and responds to the pheromone autoinducer-2 and lacks a complete activated-methyl cycle. Int J Med Microbiol. 2006 May;296 Suppl 40:92-102. Epub 2006 Mar 10.
- **von Lackum K**, Miller JC, Bykowski T, Riley SP, Woodman ME, Brade V, Kraiczy P, Stevenson B, Wallich R. *Borrelia burgdorferi* regulates expression of complement regulator-acquiring surface protein-1 (CRASP-1) during the mammal-tick infection cycle. Infect Immun. 2005 Nov;73(11):7398-405.
- Babb K, **von Lackum K**, Wattier RL, Riley SP, Stevenson B. Synthesis of autoinducer-2 by the Lyme disease spirochete, *Borrelia burgdorferi*. J Bacteriol. 2005 May;187(9):3079-87.
- **von Lackum K**, Stevenson B. Carbohydrate utilization by the Lyme borreliosis spirochete, *Borrelia burgdorferi*. FEMS Microbiol. Lett. 2005 Feb 1;243(1):173-9.
- Miller JC, **von Lackum K**, Babb K, McAlister JD, Stevenson B. Temporal analysis of *Borrelia burgdorferi* Erp protein expression throughout the mammal-tick infectious cycle. Infect Immun. 2003 Dec;71(12):6943-52.
- Alli OA, Zink S, **von Lackum NK**, Abu-Kwaik Y. Comparative assessment of virulence traits in *Legionella* spp.. Microbiology. 2003 Mar;149 (Pt 3):631-41.

Book Chapters:

- Stevenson B, Babb K, Bykowski T, Cooley AE, Woodman ME, **von Lackum K**, Riley SP, and Miller JC. 2006. The Lyme disease spirochete Erp protein family: structure, function, and regulation of expression. In Molecular Biology of Spirochetes. Cabello FC, Godfrey HP, and Hulsinka D (eds.). IOS Press BV, Amsterdam, The Netherlands. In press.
- Salmon ED, **von Lackum K**, Canman JC. Proper Alignment and Adjustment of the Light Microscope. In *Current Protocols in Microbiology*. 2005. Oct;Chapter 2:Unit 2A.1. John Wiley & Sons,

Invited Reviews:

- Stevenson B, **von Lackum K**, Riley SP, Cooley AE, Woodman, ME, Bykowski T. Evolving models of Lyme disease spirochete gene regulation. Wien. Klin. Wochenschr. 2006 Nov;118(21-22):643-52. Review.
- Stevenson B, **von Lackum K**, Wattier RL, McAlister JD, Miller JC, Babb K. Quorum sensing by the Lyme disease spirochete. Microbes Infect. 2003 Sep;5(11):991-7.

SEDATION TRAINING (UFCD):

>60 hours didactic instruction and clinical experience:

Instructors: 1) Nikolaus Gravenstein, MD. The Jerome H. Modell, MD Professor of Anesthesiology, Professor of Neurosurgery, Professor of Periodontology, University of Florida College of Medicine, Gainesville, Florida.

2) J.H. Modell, MD Professor and former Dean of Anesthesiology, University of Florida College of Medicine, Gainesville, Florida.

3) Theofilus Koutouzis, DDS, MS, Associate Professor, Department of Periodontology, UFCD

4) Rodrigo Neiva, DDS, MS, Graduate Periodontics Program Director, UFCD

Hands-On Clinical Rotations:

- 1) Phlebotomy Clinical 6 week Rotation
- 2) Bag-Mask Airway management, ventilation and management of unconscious patients receiving Electric Shock Therapy (Dr. Modell, attending)
- 3) >20 cases hands on moderate/ deep sedation cases with monitoring using midazolam and narcotic for sedation during regional anesthesia presurgical needle/ catheter placement during the ambulatory surgery clinic rotation experience. North Florida Surgical Center, Gainesville, Florida (Dr. Brown, attending)
- 4) >20 cases light to moderate conscious sedation cases with monitoring using midazolam and narcotic for sedation during oral surgery procedures. 6-week rotation in the UFCD Department of Oral and Maxillofacial Surgery (M. Franklin Dolwick, DMD, PhD attending) and 2 years training in the UFCD Department of Periodontics (T. Koutouzis, DDS, MS attending).