

John A. Lednicky, Ph.D.

Associate Professor
Environmental and Global Health
College of Public Health and Health Professions
University of Florida - Gainesville
Box 100188
1225 Center Drive, (HPNP Bldg.) Rm 2146
Gainesville, FL 32610-0188
Office phone: 352-273-9204
FAX: 352-273-6070
jlednicky@PHHP.UFL.edu

Education

Ph.D., Microbiology, University of Texas-Austin, 1991, —Molecular-Genetic Analysis of the SV40 Upstream Promoter Elements
M.S., Microbiology, University of Missouri-Kansas City, 1984
B.S., Microbiology, University of Miami, Miami, Florida, 1978

Certifications

M(ASCP), Technologist in Microbiology, American Society of Clinical Pathologists, Certificate No. M001680, 1980
RM(NRCM), Registered Microbiologist, National Registry of Certified Microbiologists, certificate #2117

Clearances

Secret Security Clearance
Centers for Disease Control (CDC), Clearance for Select Agents, September 22, 2005
CDC PI Status, October 17, 2006

Specialties

Avian influenza virus H5N1 and other influenza viruses (human and animal): detection, isolation, and genetic analysis
Microbiological assessment of air quality using active air samplers
Live agent bioaerosol inhalation studies with H5N1 and other agents
Development of human and animal virus detection, isolation, and identification methodologies
Influenza virus assays (hemagglutination, hemagglutination inhibition, etc.)
Influenza virus vaccine safety and efficacy testing
Studies of respiratory viruses including adenoviruses, coronaviruses, rhinoviruses, hantaviruses and SARS coronavirus
Reverse genetics of RNA viruses: expression of viral genes and virus production
Polyomavirus (BKV, JCV, LPV, PyV, SV40) regulatory region structure and function
Molecular and classical diagnostic virology (human and animal)
Rodent- and lagomorph-pathogen serology and diagnostic virology
Paramyxovirus detection, isolation, and genetic analysis (including *Canine distemper virus*, *Measles*, *Mumps*, *Human metapneumovirus*, and parainfluenza viruses) and immunogenicity of *Canine distemper virus*
Determination of whole genomic sequences of various DNA and RNA viruses
Diagnostic (clinical) microbiology (bacteriology, mycology, parasitology, and virology)

Work with *B. anthracis*, *Y. pestis*
Cultivation of alga and extraction of oil from alga
Production of biodiesel from algal oils

Work with other organisms

West Nile virus: detection, isolation, and molecular characterization; alpha- and flaviviruses (dengue, EEEV, JEV, WEEV, VEEV, *Yellow fever virus*, etc.), *B. anthracis*, *Y. pestis*, various fungi.

Experience

Associate Professor, Oct. 1, 2010 - Present
University of Florida, Gainesville

Establishing an aerobiology laboratory for inhalation-exposure studies. This laboratory will support work related to mechanisms of pathology, studies of respiratory pathogens, assessments of inhalation threats posed by pathogens, and vaccine efficacy/safety studies. Other work includes virus discovery/characterization of human and animal viruses and refinement of air-sampling technologies for the detection of airborne pathogens (bacteria, fungi, and viruses).

Senior Advisor, December 2009-Sept. 21, 2010
(Principal Scientist, July 2005-December 2009)
Midwest Research Institute, Kansas City, Missouri

Managed and provided technical oversight and guidance for programs involving molecular biology, virology, and microbiology; served as a corporate expert in the area of virology and molecular biology; developed and directed research programs; wrote and reviewed research proposals, technical reports, and presentations; and managed technical aspects, schedules, and budgets of programs. Recent projects included work with influenza viruses, alphaviruses, flaviviruses, *Bacillus anthracis*, SV40, *Canine distemper virus*, *Measles virus*, and algal culture. Established ferret model at MRI for intranasal and inhalation exposure studies with H5N1 and other influenza viruses. Established live agent bioaerosol capability for H5N1 and other respiratory pathogens with assistance of Richard Tuttle.

Assistant Professor, January 2001-June 2005

Department of Pathology, Loyola University Medical Center, Maywood, Illinois

Conducted molecular research on polyomaviruses and paramyxoviruses; established a new project on *Canine distemper virus* for the Conservation Medicine Center of Chicago that led to the isolation of significant new virulent isolates of the virus; fully sequenced five different *Canine distemper virus* genomes (information deposited at GenBank), the largest number by one as of July 2005; established collaborative projects on *Canine distemper virus*; established a *Canine distemper virus* testing service for the City of Chicago Animal Care and Control facility; helped the City of Chicago control a distemper outbreak in 2004; developed three projects for pathology residents and a medical student; lectured on various topics such as emerging viruses, paramyxoviruses, viral persistence, and on DNA structure and molecular biology principles; was involved with research rodent pathogen surveillance.

Research Assistant Professor, Department of Molecular Virology and Microbiology, 1997-2000
(Postdoctoral Fellow, Department of Molecular Virology and Microbiology, 1991-1996)

Baylor College of Medicine, Houston, Texas

Conducted molecular research on polyomavirus regulatory region structure and function, and on polyomavirus persistence and shedding; studied protein-protein interactions of polyomavirus tumor

proteins and cellular proteins using the yeast two-hybrid system; developed molecular diagnostic techniques for detecting and identifying polyomaviruses; cloned and sequenced the most number of different SV40 strains by one individual as of July 2005 (sequences deposited in GenBank, molecular clones deposited at the American Type Culture Collection); developed SV40 phylogenetic classification; cloned a new type of JCV genome; trained personnel in basic molecular biology and SV40 virology methods.

Research Associate, Department of Biochemistry, 1991
(Graduate Research Assistant, Department of Biochemistry, 1989-1991), University of Missouri-Columbia

Graduate Research and Teaching Assistant, Department of Microbiology, 1985-1989
(Graduate Teaching Assistant, Biology Laboratory, Department of Biology, 1984), University of Texas–Austin

Laboratory Instructor, 1983-1984, Rockhurst College, Kansas City, Missouri

Graduate Research Assistant, Department of Microbiology, 1981-1984, University of Missouri-Kansas City

Microbiology Technician, Clinical Microbiology Laboratory, 1979-1980, Med Labs, Inc., Denton, Texas

Microbiology Technician, Clinical Microbiology Laboratory, 1979, Bethany Medical Center, Kansas City, Kansas

Professional Affiliations

American Association for the Advancement of Science

American Committee on Laboratory Animal Diseases

American Chemical Society

American Society of Clinical Pathologists

American Society for Microbiology

American Society for Virology

Frontiers in Bioscience Society of Scientists (permanent member)

Previous Memberships

International Society for NeuroVirology

Wildlife Disease Association

Invited Member for Panels and Task Forces

Panel-Audience Discussion 1: Issues related to the detection of SV40 DNA in human tissues. CBER-NCI-NICHD-NCID-NIP-NVPO Workshop, National Institutes of Health, Bethesda, Maryland (Jan. 27, 1997).

Invited participant: FDA-OVRR-CBER-sponsored SV40 PCR Working Group Meeting, National Institutes of Health, Bethesda, Maryland (July 1, 1997).

Panelist: International Myeloma Foundation Virus Symposium on SV40 and Human Cancer, Karolinska Institute, Stockholm, Sweden (Sept. 7, 1999).

Invited participant: Viruses and Human Cancer Workshop, sponsored by NCI; held at Bethesda Marriott Hotel, Bethesda, Maryland (March 12-13, 2001).

City of Chicago Commission on Animal Care and Control Task Force on *Canine distemper virus* (August 2004-June 2005).

Committee Membership

Applied Clinical Research Committee, Dept. of Pathology, Loyola (3/01 – 3/02)

Conservation Medicine Center of Chicago Research Committee (2/01 – 6/05)
Conservation Medicine Center of Chicago Steering Committee (4/01 – 6/05t)
Loyola University Medical Center Institutional Biohazard Committee (8/01 – 6/05)
Molecular Development Committee, Dept. of Pathology, Loyola (2/01 – 3/02)
Rodent User Committee, Loyola (7/16/02 – 6/05)
Awards Committee for the Medical School, Loyola (8/14/02 – 6/05)
BSI (Base Supplement Incentive) Compensation Committee, Loyola (2/18/05 – 6/05)
Leadership Council (previously Council of Principal Scientists), Midwest Research Institute (7/05 – 9/10)
State of Missouri Laboratory Pandemic Influenza Preparedness Committee (1/19/06 – 2/07)
Institutional Biohazard Committee, Stowers Institute (5/06 – 9/10)
Steering Committee, Midwest Regional Center of Excellence [previously named Scientific Advisory Committee, Midwest Regional Center of Excellence] (8/06 – 9/10)
Council of Principal Scientists Awards Committee, Midwest Research Institute (12/06)
Board of Governors, Council of Principal Scientists, Midwest Research Institute (1/07 – 2/09)

Honors and Awards

Dean's List, University of Miami, 1975, 1976, 1978
Honor Society Membership, Phi Kappa Phi, 1986
McKinney Lewis Fellowship, University of Texas at Austin, 1987
Eklund Award for Excellence in Teaching, Department of Microbiology, University of Texas at Austin, 1988
Marquis Who's Who in America

Publications and Papers (name in bold font: corresponding author)

Jackson, M., J. DeSena, J. Lednicky, B. McPherson, R. Haile, R. G. Garrison, and M. Rogolsky. 1983. Isolation and characterization of a bacteriophage factor that confers competence for genetic transformation to an exfoliative toxin-producing strain of *Staphylococcus aureus*. *Infect. Immun.* **39**, 939-947.

Lednicky, J., and W. R. Folk. 1992. Two synthetic Sp1-binding sites functionally substitute for the 21-base-pair repeat region to activate simian virus 40 growth in CV-1 cells. *J. Virol.* **66**, 6379-6390.

Lednicky, J. A., C. Wong, and J. S. Butel. 1995. Artificial modification of the viral regulatory region improves tissue culture growth of SV40 strain 776. *Virus Research* **35**, 143-153.

Lednicky, J. A., R. L. Garcea, D. J. Bersagel, and J. S. Butel. 1995. Natural simian virus 40 strains are present in human choroid plexus and ependymoma tumors. *Virology* **212**, 710-717.

Stewart, A. R., J. A. Lednicky, U. Benzick, M. J. Tevethia, and J. S. Butel. 1996. Identification of a variable region at the carboxy terminus of SV40 large T-antigen. *Virology* **221**, 355-361.

Lednicky, J. A., S. Jafar, C. Wong, and J. S. Butel. 1997. High-fidelity PCR amplification of infectious copies of the complete simian virus 40 genome from plasmids and virus-infected cell lysates. *Gene* **184**, 189-195.

Lednicky, J. A., and J. S. Butel. 1997. A coupled PCR and restriction digest method for the detection and analysis of the SV40 regulatory region in infected-cell lysates and clinical samples. *J. Virol. Methods* **64**, 1-9.

Lednicky, J. A., and J. S. Butel. 1997. Tissue culture adaptation of natural isolates of SV40: changes occur in viral regulatory region but not in carboxy-terminal domain of large T-antigen. *J. Gen. Virol.* **78**, 1697-1705.

Lednicky, J. A., A. R. Stewart, J. J. Jenkins III, M. J. Finegold, and J. S. Butel. 1997. SV40 DNA in human osteosarcomas shows sequence variation among T-antigen genes. *Int. J. Can.* **72**, 791-800.

Rubelj, I., Venable, S. F., Lednicky, J., Butel, J. S., Bilyeu, T., Darlington, G., Surmacz, E., Campisi, J., and Pereira-Smith, O. 1997. Loss of T-antigen sequences allows SV40-transformed human cells to escape crisis and acquire the senescent phenotype. *J. Gerontology* **52A**, B229-234.

Stewart, A. R., J. A. Lednicky, and J. S. Butel. 1998. Sequence analyses of human tumor-associated SV40 DNAs and SV40 viral isolates from monkeys and humans. *J. Neurovirol.* **4**, 182-193.

Lednicky, J. A., A. S. Arrington, A. R. Stewart, X. M. Dai, C. Wong, S. Jafar, M. Murphey-Corb, and J. S. Butel. 1998. Natural isolates of simian virus 40 from immunocompromised monkeys display extensive genetic heterogeneity: New implications for polyomavirus disease. *J. Virol.* **72**, 3980-3990.

Butel, J. S., A. S. Arrington, C. Wong, J. A. Lednicky, and M. J. Finegold. 1999. Molecular evidence of SV40 infections in children. *J. Infectious Diseases* **180**, 884-887.

Arrington, A. S., J. A. Lednicky, and J. S. Butel. 2000. Molecular characterization of SV40 DNA in multiple samples from a human mesothelioma. *Anticancer Research* **20**, 879-884.

Strickler, H. D., et al. 2001. A multicenter evaluation of assays for detection of SV40 DNA and results in masked mesothelioma specimens. *Cancer Epidemiol., Biomarkers, and Prevention* **10**, 523-532.

Vilchez, R. A., J. A. Lednicky, S. J. Halvorson, Z. S. White, C. A. Kozinetz, and J. S. Butel. 2002. Detection of polyomavirus SV40 tumor antigen DNA in AIDS-related systemic Non-Hodgkin's lymphoma. *J. Acquir. Immune Defic. Syndro.* **29**, 109-116.

Lednicky, J. A., S. J. Halvorson, and J. S. Butel. 2002. Detection and DNA sequence analysis of the regulatory region of lymphotropic papovavirus in peripheral blood mononuclear cells of a simian immunodeficiency virus-infected Rhesus macaque with simian virus 40 disease. *J. Clin. Microbiol.* **40**, 1056-1059.

Lednicky, J. A., R. A. Vilchez, W. A. Keitel, F. Visnegarwala, Z. S. White, C. A. Kozinetz, D. E. Lewis, and Janet S. Butel. 2003. Polyomavirus JCV excretion and genotype analysis in HIV-infected patients receiving highly active antiretroviral therapy. *AIDS* **17**, 801-807.

Ling, P. A., J. A. Lednicky, W. A. Keitel, David Poston, Z. S. White, R-S Peng, Z. Liu, S. K. Mehta, D. L. Pierson, C. M. Rooney, R. A. Vilchez, E. O'Brien Smith, and J. S. Butel. 2003. The dynamics

of herpesvirus and polyomavirus reactivation and shedding in healthy adults: a 14-month longitudinal study. *Journal of Infectious Diseases* **187**, 1571 – 80.

Lednicky, J. A., T. P. Meehan, M. J. Kinsel, J. Dubach, L. L. Hungerford, N. A. Sarich, K. E. Witecki, M. D. Braid, C. Pedrak, and C. M. Houde. 2004. Effective primary isolation of wild-type *Canine distemper virus* in MDCK, MV1 Lu and Vero cells without nucleotide sequence changes within the entire haemagglutinin protein gene and in subgenomic sections of the fusion and phospho protein genes. *Journal of Virological Methods* **118**, 147-157

Rubinas, T. C., R. B. Carey, M. C. Kampert, S. Alkan, and **J. A. Lednicky**. 2004. Fatal Hemorrhagic Pneumonia Concomitant with *Chlamydia pneumoniae* and *Parainfluenza virus 4* Infection. *Archives of Pathology and Laboratory Medicine* **128**, 640-644.

Wright, M.H., L. M. Cera, N. A. Sarich, and **J. A. Lednicky**. 2004. Reverse Transcription – Polymerase Chain Reaction Detection and Nucleic Acid Sequence Confirmation of Reovirus Infection in Laboratory Mice with Discordant Serologic Indirect Immunofluorescence Assay and Enzyme-Linked Immunosorbent Assay Results. *Comparative Medicine* **54**, 410 - 417.

Zdziarski, J.M., N. A. Sarich, K. E. Witecki, and **J. A. Lednicky**. 2004. Molecular Analysis of SV-40-CAL, a New Slow Growing SV-40 Strain from the Kidney of a Caged New World Monkey with Fatal Renal Disease. *Virus Genes* **29**, 183-190.

Forsman, Z. H., J. A. Lednicky, G. E. Fox, R. C. Willson, Z. S. White, S. J. Halvorson, C. Wong, A. M. Lewis, Jr, and J. S. Butel. 2004. Phylogenetic analysis of polyomavirus simian virus 40 from monkeys and humans reveals genetic variation. *J Virol.* **78**, 9306-9316.

Lednicky, J. A., J. Dubach, T. P. Meehan, M. J. Kinsel, M. Bochetta, L. L. Hungerford, N. A. Sarich, K. E. Witecki, M. D. Braid, C. Pedrak, and C. M. Houde. 2004. Genetically distant American *Canine distemper virus* lineages have recently caused epizootics with somewhat different characteristics in raccoons living around a large suburban zoo in the USA. *Virol. J.* **1**, 2 (volume 1, article 2).

Cutrone, R., J. Lednicky, G. Dunn, P. Rizzo, M. Bocchetta, K. Chumakov, P. Minor, and M. Carbone M. 2005. Some oral poliovirus vaccines were contaminated with infectious SV40 after 1961. *Cancer Res.* **65**, 10273-10279.

Hamilton, S. B., D. E. Daniels, W. A. Sosna, E. R. Jeppesen, J. M. Owells, M. D. Halpern, K. S. McCurdy, J. O. Rayner, and **J. A. Lednicky**. 2010. Gas-permeable ethylene bags for the small scale cultivation of highly pathogenic avian influenza H5N1 and other viruses in embryonated chicken eggs. *Virol J.* **7**:e23.

Lednicky, J. A., J. M. Villanueva, S. A. Burke, R. Shively, M. W. Shaw, D. E. Daniels, S. B. Hamilton, and R. O. Donis. 2010. Validation of a Method for Preparing Influenza H5N1 Simulated Samples. *Journal of Virological Methods* **167**:125-131.

Tuttle, R. S., W. A. Sosna, D. E. Daniels, S. B. Hamilton, and **J. A. Lednicky**. 2010. Design, assembly, and validation of a nose-only inhalation exposure system for studies of aerosolized viable influenza H5N1 virus in ferrets. *Virology*. 2010 **7**:e135.

Lednicky, J. A., S. B. Hamilton, R. S. Tuttle, W. A. Sosna, D. E. Daniels, and D. E. Swayne. 2010. Ferrets develop fatal influenza after inhaling small particle aerosols of highly pathogenic avian influenza virus A/Vietnam/1203/2004 (H5N1) *Virology*. **7**:e231

Lednicky, J. A., C. R. Crutch, S. J. Lawrence, S. B. Hamilton, D. E. Daniels, and A. B. Astroff. 2010. A Non-Lethal Young Domesticated Ferret (*Mustela putorius furo*) Model for Studying Pandemic *Influenza Virus A/California/04/2009* (H1N1). *Comparative Medicine*. **60**: 364-368.

Hamilton, S. B., D. E. Wyatt, B. T. Wahlgren, M. K. O'Dowd, J. M. Morrissey, D. E. Daniels, and **J. A. Lednicky**. 2011. Higher titers of some H5N1 and recent human H1N1 and H3N2 influenza viruses in Mv1 Lu vs. MDCK cells. *Virology*. **8**:e66.

Lednicky, J. A., T. B. Waltzek, M. D. Halpern, and S. B. Hamilton. 2012. Comparative analysis of the full-length genome sequence of a clinical isolate of Human parainfluenza virus 4B. *Scientifica* e871201.

Lednicky, J.A., T.B. Waltzek, E. McGeehan, J.C. Loeb, S.B. Hamilton, and M. C. Luetke. 2013. Isolation and genetic characterization of human coronavirus NL63 in primary human renal proximal tubular epithelial cells obtained from a commercial supplier, and confirmation of its replication in two different types of human primary kidney cells. *Virology*. **10**:e213.

Lednicky, J.A. and J. C. Loeb. 2013. Detection and isolation of airborne Influenza A H3N2 virus using a Sioutas Personal Cascade Impactor Sampler. *Influenza Research and Treatment*. 10 Oct. 2013. Article ID 656825. <http://dx.doi.org/10.1155/2013/656825>

Non-peer-reviewed article (influenza virus-related)

Lednicky, J. A., and A. B. Astroff. 2010. Pandemic preparedness & the development of vaccines for H5N1 influenza at the Midwest Research Institute. *Mo Med*. 107:298-301.

Non-peer-reviewed article (aquaculture related)

Lednicky, J. A. 2004. Bumblebee goby: Effective maintenance and breeding, and raising of fry. *Aquarticles*. Accessible at:
http://aquarticles.com/articles/breeding/Lednicky_Bumblebee_Goby.html

Technical newsletter

Sue Denny, John Lednicky, and Ralph Horne. Avian Influenza (H5N1) Laboratory Fact Sheet. December 2006. Missouri Department of Health and Senior Services, State Public Health Laboratory.

Dr. John Lednicky, Dr. Jonathan Rayner, Dr. David Franz. Resources for Information on the H1N1 Swine Influenza Virus and Recommendations for Vaccination. Sept 14, 2009. Presented by MRI to US Senator Sam Brownback (Kansas).

Review Articles

Butel, J. S., J. A. Lednicky, A. R. Stewart, R. L. Garcea, and M. J. Finegold, —SV40 and human brain tumors, *J. Neurovirology*, 3 Suppl. 1, S78-79 (1997).

Butel, J. S., and J. A. Lednicky, —The cell and molecular biology of SV40: review and assessment of implications for human infections and disease, *J. Nat. Can. Inst.*, 91, 119-134 (1999).

Lednicky, J. A., and J. S. Butel, —Polyomaviruses and tumors: possible significance of association, *Frontiers in Bioscience*, 4, d153-164 (1999).

Lednicky, J. A., and J. S. Butel, —Simian virus 40 regulatory region structural diversity and the association of viral archetypal regulatory regions with human brain tumors,|| *Seminars in Cancer Biology*, 11, 39-47 (2001).

Lednicky, J. A., —Hantaviruses: A short review, *Archives of Pathology and Laboratory Medicine*, 127, 30-35 (2003).

Lednicky, J. A., and J. O. Rayner, —Uncommon Respiratory Pathogens, *Curr Opin Pulm Med*. 12, 235-239 (2006).

Book Chapters

Folk, W. R., W. J. Tang, M. Martin, J. Lednicky, S. Berger, and R. H. Adams. 1988. Polyomavirus sequences affecting the initiation of transcription and DNA replication, in: *Molecular Aspects of Papovaviruses*, Martinus Nijhoff Publishing, Boston (Yosef Aloni, ed.).

Lednicky, J. A., and J. S. Butel. 1998. Consideration of PCR methods for the detection of SV40 in tissue and DNA specimens. (*Dev. Biol. Stand.* 94:155-164).

Butel, J. S., S. Jafar, A. R. Stewart, and J. A. Lednicky. 1998. Detection of authentic SV40 DNA sequences in human brain and bone tumors. (*Dev. Biol. Stand.* 94:23-32).

Tevethia, S. S., L. Mylin, R. Newmaster, M. Epler, J. A. Lednicky, J. S. Butel, and M. J. Tevethia. 1998. Cytotoxic T lymphocyte recognition sequences as markers for distinguishing among tumor antigens encoded by SV40, BK, and JC viruses. (*Dev. Biol. Stand.* 94:329-339).

Lednicky, J. A., and R. L. Garcea. 2000. Detection of SV40 DNA sequences in human tissue. *Methods in Molecular Biology*, vol. 165: SV40 Protocols, ed.: L. Raptis. Humana Press, Inc., Totowa, NJ.

Lednicky, J.A. and Butel, J.S. Polyomavirus, Polyomaviridae, pp. 630-634. In: Tidona, C.A. and Darai, G. (eds.), *The Springer Index of Viruses*. Springer-Verlag, Berlin, 2001.

Lednicky, J.A. and Butel, J.S. Polyomavirus, Polyomaviridae, pp. 1402-1409. In: Tidona, C.A. and Darai, G. (eds.), *The Springer Index of Viruses*. Springer-Verlag, Berlin, 2011.

Lednicky, J.A. and Wyatt, D. E. 2012. The Art of Animal Cell Culture for Virus Isolation. In: *Tissue Culture*, ed: InTech, ISBN 980-953-307-097-6, Zagreb, Croatia.

<http://www.intechopen.com/articles/show/title/the-art-of-animal-cell-culture-for-virus-isolation>

Recent Abstracts and Poster Presentations

Rayner, J. O., K. S. McCurdy, C. J. Nevins, W. A. Sosna, S. B. Hamilton, J. M. Owells, R. W. Aldenderfer, M. D. Halpern, C. M. Davis, J. A. Lednicky. Quasispecies shift during passage of *Japanese encephalitis virus in vitro* and *in vivo* and its effects on neurovirulence. American Society of Virology Annual Meeting, Cornell University, New York, July 14, 2008.

O'Brien, B., K. Schnare, A. Clay, S. Hamilton, J. Lednicky, J. Coble, T. Lanigan, A. Ammenhauser, and D. Gray. Production of Biodiesel from Algae. Energy Summit , Univ MO-Columbia, April 22 – 23, 2009.

Lednicky, J. A., D. E. Daniels, S. B. Hamilton, M. D. Halpern, J. M. Owells, C. M. Davis, and J. M. Morrissey. Development and testing of surrogate influenza H5N1 virus clinical specimens. Pan American Society for Clinical Virology Conference, Daytona Beach, FL, April 20, 2009.

Lednicky, J. A., D. E. Swayne, R. Tuttle, D. E. Daniels, S. B. Hamilton, and W. A. Sosna. Different Clinical Outcomes Following Aerosol or Intranasal Exposure to Influenza H5N1 Virus in the Ferret. Aerobiology in BioDefense III Conference, Rocky Gap Conference Center, Cumberland, MD, July 13 - 16, 2009.

Tuttle, R., J. A. Lednicky, W. A. Sosna, D. E. Daniels, and S. B. Hamilton. Development of an ABSL-3 nose-only bioaerosol exposure system. Aerobiology in BioDefense III Conference, Rocky Gap Conference Center, Cumberland, MD, July 13 - 16, 2009.

John Lednicky, Ph.D., David E. Swayne, D.V.M., Ph.D., Richard Tuttle, B.S., Deirdre E. Daniels, M.S., Sara B. Hamilton, B.A., William A. Sosna, B.S. A. Barry Astroff, Ph.D. NBIES-A highly effective system for inhalational models to study influenza, plague, and anthrax. DHHS PHEMCE Stakeholders Workshop and BARDA Industry Day. December 2 - 4, 2009, Washington, DC

Influenza Virus A/CA/04/2009 (H1N1) Intranasal Challenge Study in Ferrets . J. Lednicky, C. Croutch, D. Daniels, S. Hamilton, S. Lawrence, B. Astroff. 8th ASM Biodefense and Emerging Diseases Research Meeting, Feb. 21 – 24, Baltimore Marriott Waterfront Hotel, Baltimore, MD.

Development, Validation, and Testing of a Nose-Only Bioaerosol Inhalation Exposure System to Challenge Ferrets with Highly Pathogenic Avian Influenza Virus (HPAIV). J Lednicky, W Sosna, R Tuttle, D Daniels, S Hamilton, B Astroff. Options for the Control of Influenza VII, Hong Kong SAR, China (September, 2010).

Preclinical GLP Toxicology/Safety Study of a Novel Plant-Based H1N1 Vaccine Candidate in the Rabbit. B Astroff, C Crutch, J Lednicky, S Lawrence, S Hamilton, D Daniels, J Chichester, V Yusibov. Options for the Control of Influenza VII, Hong Kong SAR, China (September, 2010).

Life-long Infection by the Same JC Virus Strain. **J. Lednicky**, J. Butel, R. Vilchez, S. Halvorson, and J. Loeb. EPI Research Day, University of Florida, (February 23, 2012).

Third Complete Genomic Sequence of Human Parainfluenzavirus 4B. **J. Lednicky**, T. Waltzek, J. Wellehan, M. Halpern, and S. Hamilton. EPI Research Day, University of Florida, (February 23, 2012).

New Canine SLAM-Expressing Cell Lines for the Isolation and Propagation of Canine Distemper Virus. **J. Lednicky**, J. Loeb, and K. Puricelli. EPI Research Day, University of Florida, (February 23, 2012).

Expanded Repertoire of Cells that Over-express SIAT1- or SIAT4- for Influenza Virus Isolation. **J. Lednicky**, M. Bender, D. Wyatt, J. Loeb, and S. Hamilton. EPI Research Day, University of Florida, (February 23, 2012).

Detection and Genetic Characterization of an Airborne Non-Culturable Type C Human Rhinovirus Collected in Air Samplers. **J. Lednicky** and J. Loeb. EPI Research Day, University of Florida, (February 23, 2012).

Investigating initiation of the immune response in the lung by nanoparticles and viruses. P. Sanpui, J. Lednicky, J. Loeb, T. Sabo-Attwood. EPI Research Day, University of Florida, (February 23, 2012).

GIANT CELL MENINGOENCEPHALOMYELITIS IN A PREGNANT ANDALUSIAN MARE. Angelique M. Leone, James F.X. Wellehan, Jr., Michael J. Dark, **John A. Lednicky**, Tom B. Waltzek, Claus D. Buergelt, Jennifer L. Owen, Rick Alleman, Martha Mallicote, L. Chris Sanchez, Julia A. Conway. Concurrent Annual Meetings of the American College of Veterinary Pathologists and the American Society for Veterinary Clinical Pathology. December 1-5, 2012, Washington State Convention Center in Seattle, Washington. *Angelique Leone received a young investigator award (3rd place) in the section of natural disease.

GIANT CELL MENINGOENCEPHALOMYELITIS IN A PREGNANT ANDALUSIAN MARE. Angelique M. Leone, Rick Alleman, Claus Buergelt, Julia Conway, Michael Dark, Elizabeth Howerth, **John Lednicky**, Jennifer Owen, Tom Waltzek, James Wellehan. EPI Research Day, University of Florida, (February 13, 2013).

Modulation of influenza virus infectivity and activation of toll-like receptors by carbon nanomaterials. X. Zheng, P. Sanpui, **J. Lednicky**, J. Loeb, T. Sabo-Attwood. EPI Research Day, University of Florida, (February 13, 2013).

Recent Oral Presentations

Special Considerations for Avian Influenza Virus and Current Testing Algorithms. Laboratory Pandemic Influenza Conference, organized by the Missouri State public Health Laboratory. Held at the Capitol Plaza Hotel, Jefferson City, Missouri, April 19, 2007.

A role for structural biologists in virus discovery, pathology, and aerobiology. University of Texas Medical Branch, Galveston, Texas, May 30, 2007.

Highly Pathogenic Avian Influenza Viruses: Mini-review and Development of a Laboratory for Live Agent Inhalation Exposure Studies. Department of Pathology, University of Texas Health and Science Center, Houston, Texas, May 30, 2008.

Algae Growth and Oil Extraction. Center for Algae Research Workshop (June 2 -3, 2008). MRI-Florida Division, Palm Bay, Florida, June 3, 2008.

Different Clinical Outcomes Following Aerosol or Intranasal Exposure to Influenza H5N1 Virus in the Ferret. Aerobiology in BioDefense III Conference, Rocky Gap Conference Center, Cumberland, MD, July 15, 2009.

Exposure of ferrets to aerosolized virulent *Influenza virus* H5N1 strain Vietnam/1203/2004. Department of Diagnostic Medicine/Pathobiology, College of Veterinary Medicine, Kansas State University, Oct. 29, 2009.

SV40, and an Effective Nose-Only Inhalation Exposure System Suitable for Studies of Airborne Pathogens Including Oncogenic Viruses. Cancer Research Center of Hawaii, University of Hawaii, Honolulu, Hawaii, 12 Nov. 2009.

A nose-only inhalation exposure study in ferrets using aerosolized virulent *Influenza virus* H5N1 strain Vietnam/1203/2004. College of Global Health and Health Professions, University of Florida, Gainesville, Florida, 7 June 2010.

Recent short oral presentations

Modeling of Airborne Exposure to Influenza Viruses, Exemplified Using a Nose-only Inhalation Exposure System, Ferrets, and Aerosolized Virulent *Influenza virus* A/Vietnam/1203/2004 (H5N1). Presentation for Drs. N. Cox and C. Bridges, CDC, held at the Emerging Pathogens Institute, University of Florida - Gainesville, 9 Nov. 2010.

Modeling of Airborne Exposure to Influenza Viruses, Exemplified Using a Nose-only Inhalation Exposure System, Ferrets, and Aerosolized Virulent *Influenza virus A/Vietnam/1203/2004* (H5N1). Presentation for Dr. R. Schoepp, USAMRIID, held at the Emerging Pathogens Institute, University of Florida - Gainesville, 17 Dec. 2010.

Enhancement of LAIV by administration of FluMist with and without anti-IgA (ferret model). Presentation for contingent from MedImmune; held at the Emerging Pathogens Institute, University of Florida - Gainesville, 5 January 2011.

A Nose-only Inhalation Exposure System for Studies of Aerosolized *Influenza virus* in Ferrets. Presentation for Dr. Robert Nutsch of Pfizer Inc.; held at the Emerging Pathogens Institute, University of Florida - Gainesville, 11 January 2011.

A Nose-only Inhalation Exposure System for Studies of Aerosolized *Influenza virus* in Ferrets. Presentation for Drs. Otgonbaatar & Tserennorov from Mongolia's National Center for Infectious Diseases with Natural Foci; held at the Emerging Pathogens Institute, University of Florida - Gainesville, 17 January 2011.

A nose-only inhalation exposure system for studies of aerosolized pathogens in small animals. College of Veterinary Medicine, University of Florida, Gainesville, Florida, 27 Sept. 2011.

Refinement of Virus Detection and Isolation Methodologies for Aerobiology Studies. J. Lednicky, Viral Surrogate Pathogen Workshop, 16 May 2012, Naval Research Laboratory, Washington, DC.

Recent studies regarding the aerobiology of influenza and other respiratory viruses. Public Health Seminar Series, College of Public Health and Health Professions. University of Florida, 18 Feb. 2013.

Recent Grant Proposal Review Panel Participation

Defense Threat Reduction Agency's Chemical Biological Technologies (DTRA) Directorate FY12/13 Service Call for proposal number CBCALL12-DIAGB1-1-0105. 1/7/2011 – 2/11/2011

CDC Special Emphasis Panel – FOA CK11-006; Combining subjective and objective methods for quantifying contact rates and mixing patterns in school-aged children. 4/13/2011 – 5/3/2011.

NIH NIAID Special Emphasis Panel for Phased Innovation Awards on Partnerships for Interventions to Treat Chronic, Persistent and Latent Infections. 10/17/2012 – 12/12/2012. ZAI1 JKB-M J4; Jane Battles, SRO R1/R33 RFA-A1-12-020

International Advisory Board

Global Center for Mass Gathering Medicine (a WHO Collaborating Center for MGM) – 1st Scientific Advisory Board Meeting, 29 April – 1 May, 2013. Ministry of Health Conference Hall, 2nd Tower, Ground Floor, Riyadh, Kingdom of Saudi Arabia

Global Center for Mass Gathering Medicine (a WHO Collaborating Center for MGM) – 2nd International Conference for Mass Gathering Medicine, 21 – 23 September, 2013. Ritz-Carlton Hotel, Riyadh, Kingdom of Saudi Arabia.

International Project Coordination

Transported research supplies to IBMP (Institute for Biomedical Problems, State Research Center of Russia) in Moscow, Russia, and trained IBMP personnel for joint project (Latent Virus Reactivation During a 240-Day Chamber Study of SFINCSS Program) with NSBRI Immunology, Infection, and Hematology team. June 16 – 22, 1999.

Transported research supplies to the Ministry of Health (MOH), Kingdom of Saudi Arabia, and trained MOH personnel on the collection of airborne microorganisms using AGI-30 air samplers. Jeddah, Saudi Arabia, Oct. 12 – 23, 2013.

Primary Isolation and Characterization of SV40 Viruses

SV40-strain CPC/MEN. Described in Lednicky et al., *Virol.* 212, 710-717 (1995) and in Stewart et al., *J. NeuroVirol.* 4, 182-193 (1998). Plasmid clone deposited in ATCC (ATCC # VRMC-4).

SV40-strain K661. Described in: Lednicky et al., *J. Virol.* 72, 3980-3990 (1998). Plasmid clone deposited in ATCC (ATCC # 87722).

SV40-strain T302. Described in: Lednicky et al., *J. Virol.* 72, 3980-3990 (1998) (ATCC # VRMC-14).

SV40-6593-2. Described in: Lednicky et al., *J. Virol.* 72, 3980-3990 (1998).

SV40-Baylor-1 (SV40-B1). Described in: Lednicky, J. A. and J. S. Butel, *J. Gen. Virol.* 78, 1697-1705 (1997). Plasmid clone deposited in ATCC (ATCC # VRMC-2).

SV40-Baylor-3 (SV40-B3). (Unpublished)

SV40-CAL-1. Described in: *Virus Genes* 29, 183-190 (2004).

Numerous additional plasmid clones (containing full-length virus genomes) have been deposited at ATCC.

Primary Isolation and Characterization of Miscellaneous Viruses that are Difficult to Isolate *In-Vitro* (partial list)

Canine coronavirus

Canine distemper American type 2 (numerous strains from dogs and wildlife)

Canine influenza virus

Dolphin morbillivirus

Human coronavirus NL63

Human parainfluenza virus 4A

Human parainfluenza virus 4B

JCV-JAL-1

Kilham rat virus-JAL-1

Sea lion adenovirus

+ Various viruses from animals and humans still being worked on

Molecular Detection of Non-Culturable Viruses

Human polyomavirus 9 (new variant), tentatively designated type C (partial clone available)
Human rhinovirus 51-C strain JAL (unique and optimal reverse genetics system clone has been prepared for this virus)

GenBank Submissions

Dr. Lednicky served as primary author on >120 entries for a wide variety of viruses, from canine distemper to human parainfluenza. He is a co-author of many other entries, including the full genomic sequences of *West Nile virus*, *Eastern equine encephalitis virus*, *Japanese encephalitis virus* and most recently, *Human parainfluenza 4B virus*, *Human coronavirus NL63*, *Human rhinovirus 51-C*.