

Jason K. Blackburn, Ph.D.

Director and Associate Professor,
 Spatial Epidemiology & Ecology Research Laboratory,
 Department of Geography & Emerging Pathogens Institute
 University of Florida
 352-294-7501 Office
jkblackburn@ufl.edu
www.seerlab.org

EDUCATIONAL BACKGROUND

Institution	Field of Study	Degree	Year
Louisiana State University	Medical Geography	Ph.D.	2006
Louisiana State University	Medical Geography	MS	2003
Louisiana State University	Physical Geography	BS	2001

EMPLOYMENT

Institution	Position	Dates
University of Florida	Associate Professor	2015 – present
University of Florida	Assistant Professor	2009 – 2015
California State Univ. Fullerton	Assistant Professor	2007 – 2009
Louisiana State University	Research Associate V	2006-2007
Independent GIS consultant	Analyst/Research	2005-2008
Louisiana State University	GIS Lab Manager	2004-2006
Louisiana State University	Graduate Research Assistant	2001-2006
Louisiana State University	NMFS/State Contact	2002-2006
Baton Rouge Community College	Adjunct Professor	2003-2005
Louisiana State University	Geography Instructor	2004
Louisiana State University	Field Technician	1999-2001
Hubbs Research Institute, CA	Field Technician	1999-2000
Blackburn Drainage & Const.	Heavy Equipment Ops.	1998-1999
Sea World San Diego	Animal Care Specialist	1996-1998
Sea World San Diego	Educator	1995-1996

PROFESSIONAL MEMBERSHIP

URISA 2007 – present.

Association of American Geographers. 2000 – present.

American Society of Microbiologists. 2012 – present.

Founding member lead US Scientist for the Kyrgyz Consortium for GIS Excellence, Bishkek, Kyrgyzstan. Organize scientific workshops and assist with tuition decisions and training syllabi.

Organizing Committee Chair for the 2011 URISA GIS and Health Conference, June 2013

Organizing Committee Member for the 2011 URISA GIS and Health Conference, June 2011

Organizing Committee Member for the 2009 URISA GIS and Health Conference, June 2009

WORKSHOPS

Blackburn, J.K. and T.A. Joyner. Ecological Niche Modeling for Predicting Disease Distributions: Designing Experiments and Interpreting Results. URISA GIS and Public Health Conference, Friday 9 June 2009.

Blackburn, J.K. and K.M. McNyset. Ecological Niche Modeling for disease research with the GARP system, Louisiana State University, Baton Rouge, LA. May 24 – 26 2007

Blackburn and deWalder. Kyrgystani Consortium for GIS Excellence: Introductory workshop on GIS in Kyrgystan. (JKB – Lead scientific PI / consortium author with C. deWalder and M. Pruett)

Blackburn, J.K. 2005 ORGANIZER. The Role of Shark Biologists Across Academia, State and Federal Agencies. A graduate workshop of the American Elasmobranch Association. Saturday, July 9, 2005.

HONORS

-Field of Dreams Award. Biological Threat Reduction Program, October 2009 in honor of building GIS training centers across the former Soviet Union Republics of Uzbekistan, Kazakhstan, Ukraine, Azerbaijan, and Georgia.

-Outstanding Adjunct Faculty Award – Baton Rouge Community College, Spring 2005

-American Fisheries Society, Louisiana Chapter. February 2002. Best student paper award “A re-examination of the status of *Fundulus majalis* and *Fundulus similis*”

-Robert C. West Field Grant, LSU Dept of Geog/Anthro, Spring 2004. Field support to acoustically track yellowfin tunas in the presence of Louisiana offshore oil platforms. \$600.00

-Baton Rouge Area Foundation, Spring 2001. To purchase telemetry equipment. \$6100.00

-Louisiana Sea Grant College Program, Undergraduate Research Opportunity Grant. Fall 2000. To conduct original research on shark movements in Louisiana. \$2000.00

TEACHING

University of Florida

GEO6938 Applications of GIS for Disease Ecology

VEM5571 Guest lecture each spring on bioterrorism and zoonoses for vet students

California State University, Fullerton (2007-2009)

GEO110 – Physical Geography (now Introduction to the Natural Environment)

GEO327 – Global Public Health

GEO485 – Advanced GIS

GEO455 – Spatial Epidemiology (Medical Geography)

GEO530T – Modeling Species Distributions

PREVIOUS GRADUATE STUDENTS/PLACEMENT

Ian Kracalik, MA (CSU Fullerton), Geography 2009. Moved to UF as Research Program Coordinator for SEER Lab 2009 – 2015, PhD Student 2015-2017.

Timothy Andrew Joyner, MS, Geography 2010. Graduated from UF and attend LSU for PhD

Jake Hightower, MS, Geography 2012. Enrolled in UF Geography PhD Program, 2012.

Jocelyn C. Mullins, PhD, Geography 2013. CDC Epidemiological Intelligence Service and now faculty at St. Joseph's School of Public Health in Connecticut.

Lillian R. Morris, PhD Geography 2016. Spatial Epidemiologist, State Department of Health, Washington.

Alassane Barro, PhD, Geography 2016. Spatial Epidemiologist, State Department of Health, Texas.

Dawn Nekorchuk, PhD, Geography 2017. Staff Medical Geography Scientist, SEER Lab through June 2017.

Ian T. Kracalik, PhD (Summer 2017), CDC Epidemiological Intelligence Service, Uniformed Officer in Public Health Service.

CURRENT STUDENTS

Anni Yang, PhD Student

Emily Dinh, PhD Student

Max Morris, Undergraduate Research Assistant

Alexandra Campione, Undergraduate Research Assistant

PUBLICATIONS (underline = Senior or Corresponding Author, *Student)

Peer Reviewed Publications

2017

Blackburn J.K., Matarimov, S., Kozhokeeva, S., Tagaeva, Z., Bell, L.K., Kracalik, I.T., Zhunushov, A. 2017. Modeling the Ecological Niche of Bacillus anthracis to Map Anthrax Risk in Kyrgyzstan. American Journal of Tropical Medicine and Hygiene. 96(3): 550-556.

2016

*Barro, A.S., M. Fegan, B. Moloney, K. Porter, J. Muller, S. Warner, **J.K. Blackburn**. 2016. Redefining the Australian Anthrax Belt: modeling the ecological niche and predicting the geographic distribution of Bacillus anthracis. PLoS Negl Trop Dis 10(6):e0004689. doi:10.1371/journal.pntd.0004689.

Boswell, K. M., G. Rieucan, J. J. Vollenweider, J. R. Moran, R. A. Heintz, **J. K. Blackburn**, and D. J. Csepp. 2016. Are spatial and temporal patterns in Lynn Canal overwintering Pacific herring related to top predator activity? Canadian Journal of Fisheries and Aquatic Sciences.

Curtis, A., **J. K. Blackburn**, S. L. Smiley, M. Yen, A. Camilli, M. T. Alam, A. Ali, and J. G. Morris. 2016. Mapping to Support Fine Scale Epidemiological Cholera Investigations: A Case Study of Spatial Video in Haiti. International journal of environmental research and public health 13:187.

*Morris, L.M., K.M. Proffitt, **J.K. Blackburn**. 2016. Mapping resource selection functions in wildlife studies: Concerns and recommendations. Applied Geography 76: 173-183. <http://dx.doi.org/10.1016/j.apgeog.2016.09.025>

*Morris, L.M. and **Blackburn, J.K.** 2016. Predicting disease risk, identifying stakeholders, and informing control strategies: A case study of anthrax in Montana. EcoHealth. DOI: 10.1007/s10393-016-1119-7

*Morris, L. R., K. M. Proffitt, V. Asher, and **J. K. Blackburn**. 2016. Elk resource selection and implications for anthrax management in Montana. Journal of Wildlife Management 80(2): 235-244.

S raphin, M.N., M. Lauzardo, R.T. Doggett, J. Zabala, J.G. Morris, Jr., **J.K. Blackburn**. 2016. Spatiotemporal Clustering of Mycobacterium tuberculosis Complex Genotypes in Florida: Genetic Diversity Segregated by Country of Birth. PLoS ONE 11(4): e0153575. doi:10.1371/journal.pone.0153575

Shimwela, M.M., **J.K. Blackburn**, J.B. Jones, J. Nkuba, H.A. Narouei-Khandan, R.C. Ploetz, F. Beed, A.H.C. van Bruggen. 2016. Local and regional spread of banana xanthomonas wilt (BXT) in space and time in Kagera, Tanzania. Plant Pathology. doi: 10.1111/ppa.12637

Shimwela, Mpoki M., Randy C. Ploetz, Fen D. Beed, Jeffrey B. Jones, **Jason K. Blackburn**, Shabani I. Mkulila, and Ariena H. C. van Bruggen. 2016. Banana Xanthomonas Wilt Continues to Spread in Tanzania despite an Intensive Symptomatic Plant Removal Campaign: An Impending Socio-Economic and Ecological Disaster. Food Security, 1–13. doi:10.1007/s12571-016-0609-3.

Switzer, A., L. Munson, C. Beesley, P. Wilkins, **J.K. Blackburn**, Laurie Marker. 2016. Namibian farmland cheetahs (*Acinonyx jubatus*) demonstrate seronegativity for antibodies against *Bacillus anthracis*. African Journal of Wildlife Research. African Journal of Wildlife Research 46(2):139-143.

2015

Barro, A. S., I. T. Kracalik, L. Malania, N. Tsertsvadze, J. Manvelyan, P. Imnadze, and **J. K. Blackburn**. 2015. Identifying hotspots of human anthrax transmission using three local clustering techniques. Applied Geography 60:29–36.

Blackburn, J. K., I. T. Kracalik, and J. M. Fair. 2015. Applying Science: opportunities to inform disease management policy with cooperative research within a One Health framework. Frontiers in public health 3.

Blackburn, J. K., M. O. Odugbo, M. Van Ert, B. O’Shea, J. Mullins, V. Perrenten, A. Maho, M. Hugh-Jones, and T. Hadfield. 2015. *Bacillus anthracis* Diversity and Geographic Potential across Nigeria, Cameroon and Chad: Further Support of a Novel West African Lineage. PLoS Negl Trop Dis 9:e0003931.

Elashvili, E., I. Kracalik, I. Burjanadze, S. Datukishvili, G. Chanturia, N. Tsertsvadze, L. Beridze, M. Shavishvili, A. Dzeladze, M. Grzelidze, P. Imnadze, A. Pearson, **J.K. Blackburn**. 2015. Environmental Monitoring and Surveillance of Rodents and Vectors for *Francisella tularensis* Following Outbreaks of Human Tularemia in Georgia. Vector-Borne and Zoonotic Diseases 15:633–636.

Kracalik, I., L. Malania, P. Imnadze, and **J. K. Blackburn**. 2015. Human Anthrax Transmission at the Urban–Rural Interface, Georgia. The American journal of tropical medicine and hygiene 93:1156–1159.

- Kracalik, I., R. Abdullayev, K. Asadov, R. Ismayilova, M. Baghirova, N. Ustun, M. Shikhiyev, A. Talibzade, and **J. Blackburn**. 2015. Human Brucellosis Trends: Re-emergence and Prospects for Control Using a One Health Approach in Azerbaijan (1983–2009). *Zoonoses and Public Health*.
- Morris, L. R., K. M. Proffitt, V. Asher, and **J. K. Blackburn**. 2015. Elk resource selection and implications for anthrax management in Montana. *The Journal of Wildlife Management*.
- Mullins, J. C., M. Ert, T. Hadfield, M. P. Nikolich, M. E. Hugh-Jones, and **J. K. Blackburn**. 2015. Spatio-temporal patterns of an anthrax outbreak in white-tailed deer, *Odocoileus virginianus*, and associated genetic diversity of *Bacillus anthracis*. *BMC ecology* 15:1.
- Walker, R., and **J. Blackburn**. 2015. Biothreat Reduction and Economic Development: The Case of Animal Husbandry in Central Asia. *Frontiers in public health* 3.

2014

- Bezymennyi, M., Bagamian, K.H.^P, Barro, A.^g, Skrypnyk, A., Skrypnyk, V., **Blackburn, J.K.** 2014. Spatio-temporal patterns of livestock anthrax in Ukraine during the past century (1913-2012). *Applied Geography* 54:129-138.
- Karoun H. Bagamian^P, Artem Skrypnyk, Yana Rodina, Maksym Bezymennyi, Oleg Nevolko, Valeriy Skrypnyk, **Blackburn, J.K.** 2014. Serological anthrax surveillance in wild boar (*Sus scrofa*) in Ukraine. *Vector-Borne and Zoonotic Diseases* 14(8) 618-620.
- Blackburn, J.K.**, Skrypnyk, A., Bagamian, K.^P, Nikolich, M., Bezymennyi, M., Skrypnyk, V. 2014. Anthrax in a backyard domestic dog in Ukraine: a case report. *Vector-Borne and Zoonotic Diseases* 14(8): 615-617.
- Blackburn, J.K.**, *Diamond, U., Kracalik, I.T., Widmer, J., Brown, W., *Morrissey, B., Alexander, K.A., Curtis, A., Afsar, A., Morris, Jr., J.G. 2014. Household-level spatio-temporal patterns of incidence of cholera, Haiti, 2011. *Emerging Infectious Diseases* 20(9):1516-1519.
- Blackburn, J.K.**, Van Ert, M.E., Mullins, J.C.^g, Hadfield, T.L., Hugh-Jones, M.E. 2014. The necrophagous fly anthrax transmission pathway: empirical and genetic evidence from wildlife epizootics. *Vector-Borne and Zoonotic Diseases* 14(8): 576-583.
- Kracalik, I.T., Abdullayev, R., Asadov, K., Ismayilova, R., Baghirova, M., Ustun, N., Shikhiyev, M., Talibzade, A., **Blackburn, J.K.** 2014. Changing patterns of human anthrax in Azerbaijan in the Post-Soviet and preemptive livestock vaccination eras. *PLOS Neglected Tropical Diseases* 8(7); e2985. doi: [10.1371/journal.pntd.0002985](https://doi.org/10.1371/journal.pntd.0002985)
- Widmer, J., Weppelmann, T., Alam, M., Morrissey, D., Redden, E., Rashid, M., *Diamond, U., Ali, A., de Rochars, V., **Blackburn, J.K.**, Johnson, J.A., Morris, J.G. 2014. Water-Related Infrastructure in a Region of Post-Earthquake Haiti: High Levels of Fecal contamination, and Need for Ongoing Monitoring. *American Journal of Tropical Medicine and Hygiene*. Published online July 28, 2014, pii: 14-0165. (Epub ahead of print)
- Blackburn, J.K.**, Hadfield, T.L., Curtis, A.J., Hugh-Jones, M.E. 2014. Spatial and temporal patterns of anthrax in white-tailed deer, *Odocoileus virginianus*, and hematophagous flies in west Texas during the summertime anthrax risk period. *Annals of the Association of American Geographers* 104(5):939-958.

Blackburn, J.K., Asher, V., Stokke, S., Hunter, D.L, Alexander, K.A. 2014. Dances with anthrax: wolves (*Canis lupus*) kill anthrax bacteremic bison in southwestern Montana. *Journal of Wildlife Diseases* 50(2): 393-936.

Patrick J Kelly, Helene M Lucas, Craig M Randolph, Kate Ackerson, **Jason K Blackburn**, Michael J Dark. 2014. Efficacy of slow-release tags impregnated with aggregation-attachment pheromone and deltamethrin for control of *Amblyomma variegatum* on St. Kitts, West Indies. *Parasites and Vectors* 7:182.

Kracalik, I.T., Malania, L., Tsertsvadze, N., Manvelyan, J., Bakanidze, L., Imnadze, P., Tsanova, S., **Blackburn, J.K.** 2014. Human Cutaneous Anthrax in the Country of Georgia 2010-2012. *Emerging Infectious Diseases* 20(2): 261-264.

Skrypnyk, V., R. Koziy, A. Skrypnyk, I. Rublenko, K. H. Bagamian^P, J. Farlow, M. Nikolich, A. Mezhenkiy, O. Nevolko, **J.K. Blackburn**. 2014. Anthrax in dogs. *уча СучаССні наукові розробки* 1:14-17.

2013

Alexander, K.A. and **Blackburn, J.K.** 2013. Overcoming barriers in evaluating outbreaks of diarrheal disease in resource poor settings: assessment of recurrent outbreaks in Chobe District, Botswana. *BMC Public Health*. 13:775.

Bagamian, K^P., Alexander, K.A., Hadfield, T.L., **Blackburn, J.K.** 2013. ANTE- AND POSTMORTEM DIAGNOSTIC TECHNIQUES FOR ANTHRAX: RETHINKING PATHOGEN EXPOSURE AND THE GEOGRAPHIC EXTENT OF THE DISEASE IN WILDLIFE. *Journal of Wildlife Diseases* 49(4): 786-801.

Blackburn, J.K. and D.G. Goodin. 2013. Differentiation of Springtime Vegetation Indices Associated with Summer Anthrax Epizootics in West Texas, USA, Deer. *Journal of Wildlife Diseases* 49(3): 699-703.

Blackburn, J.K. 2013. A need for a One Health approach to anthrax surveillance and control. *One Health Newsletter* 6(1): Winter volume. Florida Department of Public Health. Available online.

Curtis, A., **J.K. Blackburn**, J. Widmer, J.G. Morris. 2013. A ubiquitous method for street scale spatial data collection and analysis in challenging urban environments: mapping health risks using spatial video in Haiti. *International Journal of Health Geographics* 12:21 doi:10.1186/1476-072-12-21.

Kracalik, I.T., Malania, L., Tsertsvadze, N., Manvelyan, J., Bakanidze, L., Imnadze, P., Tsanova, S., **Blackburn, J.K.** 2013. Evidence of local persistence of human anthrax in the country of Georgia associated with environmental and anthropogenic factors. *PLOS Neglected Tropical Diseases*.

Mamisashvili, M., Kracalik, I.T., Onashvili, T., Kerdzevadze, L., Goginashvili, K., Tigilauri, T., Donduashvili, M., Nikolaishvili, M., Beradze, I., Zakareishvili, M., Kokhraidze, M., Gelashvili, M., Vepkhvadze, N., Racz, S.E., Elzer, P.H., Nikolich, M.P., **Blackburn, J.K.** 2013. Seroprevalence of brucellosis in livestock within three endemic regions of the country of Georgia. *Preventative Veterinary Medicine* 110: 554-557. First published online 2012.

- Morris, J.G., Grattan, L.M., Mayer, B.M., **Blackburn, J.K.** 2013. Psychological Responses and Resilience of People and Communities Impacted by the Deep Water Horizon Oil Spill. *Transactions of the American Clinical and Climatological Association* 124: 191-201.
- Morris, L.R. ⁹, **Blackburn, J.K.**, Talibzade, A., Kracalik, I.T., Ismaylova, R., Abdullayhev, R. 2013. Informing Plague Surveillance in the Lowland Plague Focus of Azerbaijan Using a Historic Dataset. *Journal of Applied Geography* 45:269-279.
- Mullins, JC ⁹, Garofolo, G, Van Ert, M, Fasanella, A, Luknova, L, Hugh-Jones, ME, **Blackburn, JK.** 2013. Ecological Niche Modeling of *Bacillus anthracis* on Three Continents: Evidence for Genetic-Ecological Divergence? *PLoS ONE* 8(8): e72451. doi:10.1371/journal.pone.0072451

2012

- Abdullayev, R., I. T. Kracalik, R. Ismayilova, N. Ustun, A. Talibzade, and **J.K. Blackburn.** 2012. Analyzing the spatial and temporal distribution of human brucellosis in Azerbaijan (1995-2009) using spatial and spatio-temporal statistics. *BMC Infectious Diseases* 12:185.
- Alexander, K. A., **J. K. Blackburn**, M. E. Vandewalle, R. Pesapane, E. K. Baipoledi, and P. H. Elzer. 2012. Buffalo, Bush Meat, and the Zoonotic Threat of Brucellosis in Botswana. *PloS one* 7:e32842.
- Alexander, K. A., B. Lewis, M. Marathe, S. Eubank, and **J. K. Blackburn.** 2012. Modeling of Wildlife Associated Zoonoses: Applications and Caveats. *Vector-Borne and Zoonotic Diseases*. Ahead of Print Available.
- Fasanella, A., G. Garofolo, M. Hossain, M. Shamsuddin, **J.K. Blackburn**, and M. Hugh-Jones. 2012. Bangladesh anthrax outbreaks are probably caused by contaminated livestock feed. *Epidemiology and Infection* 1:1-8.
- Kracalik, I. T. ⁹, **J. K. Blackburn**, L. Lukhnova, Y. Pazilov, M. E. Hugh-Jones, and A. Aikimbayev. 2012. Analyzing the spatial patterns of livestock anthrax in Kazakhstan in relation to environmental factors: a comparison of local (Gi*) and morphology cluster statistics. *Geospatial health* 7(1):111-126.

2011

- Alexander, K. A., **J. K. Blackburn**, and E. A. Frimpong. 2011. Trails and Tribulations-Buffalo and Maslow's hammer. *Frontiers in Ecology and the Environment* 9:302-303.
- Kracalik, I. ⁹, L. Lukhnova, A. Aikimbayev, Y. Pazilov, G. Temiralyeva, and **J. K. Blackburn.** 2011. Incorporating retrospective clustering into a prospective cusum methodology for anthrax: Evaluating the effects of disease expectation. *Spatial and Spatio-temporal Epidemiology* 2:11-21.
- Lentz, J. A. ⁹, **J. K. Blackburn**, and A. J. Curtis. 2011. Evaluating patterns of a white-band disease (WBD) outbreak in *Acropora palmata* using spatial analysis: a comparison of transect and colony clustering. *PloS one* 6:e21830.
- Mullins, J. ⁹, L. Lukhnova, A. Aikimbayev, Y. Pazilov, M. Van Ert, and **J. K. Blackburn.** 2011. Ecological Niche Modelling of the *Bacillus anthracis* A1. a sub-lineage in Kazakhstan. *BMC Ecology* 11.

2010

Aikembayev, A. M., L. Lukhnova, G. Temiraliyeva, T. Meka-Mechenko, Y. Pazylov, S. Zakaryan, G. Denissov, W. R. Easterday, M. N. Van Ert, P. Keim, S. C. Francesconi, **J. K. Blackburn**, M. E. Hugh-Jones, and T. L. Hadfield. 2010. Historical distribution and molecular diversity of *Bacillus anthracis*, Kazakhstan. *Emerging Infectious Diseases* 16:789-796.

Blackburn, J.K., A. Curtis, T. Hadfield, B. O'Shea, M. Mitchell, and M. Hugh-Jones. 2010. Confirmation of *Bacillus anthracis* from Flesh-eating Flies Collected during a West Texas Anthrax Season. *Journal of Wildlife Diseases* 46:918-22.

Blackburn, J.K., M. Mitchell, M. Blackburn, A. Curtis, and B. Thompson. 2010. Evidence of Antibiotic Resistance in Free-Swimming, Top-Level Marine Predatory Fishes. *Journal of Zoo and Wildlife Medicine* 41:7-16.

Joyner, T.,⁹ L. Lukhnova, Y. Pazilov, G. Temiralyeva, M. Hugh-Jones, A. Aikimbayev, and **J.K. Blackburn**. 2010. Modeling the potential distribution of *Bacillus anthracis* under multiple climate change scenarios for Kazakhstan. *PloS one* 5:e9596.

2009

Hugh-Jones, M.E. and **J.K. Blackburn**. 2009. Ecology of *Bacillus anthracis*. *Molecular aspects of Medicine* 30: 356-367.

2008

Blackburn, J.K., A. Curtis, F.C. Mujia, F. Jones, P. Dorn, R. Coates. 2008. The development of the Chagas' Online Data Entry System (CODES-GIS). *Transactions in GIS*. 12(2): 249 - 265.

2007

Blackburn, J.K., McNyset, K.M., Hugh-Jones, M.E., Curtis, A. 2007. Predicting the geographic distribution of anthrax, *Bacillus anthracis*, for the contiguous United States using a machine-learning algorithm. *American Journal of Tropical Medicine and Hygiene* 77(6): 1103-1110.

Curtis, A., **J.K. Blackburn**, J.W. Mills. 2007. Calculating a Spatial Variant of the Basic Reproduction Number (R0) for the New Orleans Yellow Fever Epidemic of 1878. *Professional Geographer*.

2006

McNyset, K.M. and **Blackburn, J.K.** 2006. Does GARP really fail miserably? A response to Stockman et al. (2006). *Diversity and Distributions*.

Keenan, S.F., M.C. Benfield, **J.K. Blackburn**. 2006. Potential importance of the artificial light field around offshore petroleum platforms for the associated fish community. *Marine Ecology Progress Series*.

Hinman, S.E., **J.K. Blackburn**, A.C. Curtis. 2006. Spatial and temporal structure of typhoid outbreaks in Washington, D.C., 1906-1909: evaluating local clustering with the Gi* statistic. *International Journal of Health Geographics*.

Curtis, A., Mills, J.W., **Blackburn, J.K.**, Pine, J.C., Kennedy, B. 2006. Louisiana State University Geographic Information System Support of Hurricane Katrina Recovery Operations. *International Journal of Mass Emergencies and Disasters* 24(2): 203 – 221.

2005

Suttkus, R.D., B.A. Thompson, **J.K. Blackburn**. 2005. An analysis of the Menidia complex in the Mississippi River Valley and in two nearby minor drainages. *Southeastern Fishes Council Proceedings* 48: 1—9.

Book Chapters

BLACKBURN, J. 2010. Integrating geographic information systems and ecological niche modeling into disease ecology: a case study of *Bacillus anthracis* in the United States and Mexico. *In: K.P. O'CONNELL, E. W. S., A. SULAKVELIDZE, L. BAKANIDZE (ed.) Emerging and Endemic Pathogens: Advances in Surveillance, Detection, and Identification.* Springer.

BLACKBURN, J., NEER, J. & THOMPSON, B. 2007. Delineation of bull shark nursery areas in the inland and coastal waters of Louisiana. *In: C.T. MCCANDLESS, N. E. K., H.L. PRATT (ed.) Shark Nursery Grounds of the Gulf of Mexico and the East Coast of the United States.* AMERICAN FISHERIES SOCIETY.

NEER, J., **BLACKBURN, J.** & THOMPSON, B. 2007. Shark nursery areas of central Louisiana's nearshore coastal waters. *In: C.T. MCCANDLESS, N. E. K., H.L. PRATT (ed.) Shark Nursery Grounds of the Gulf of Mexico and the East Coast Waters of the United States.* AMERICAN FISHERIES SOCIETY.

CURTIS, A., **BLACKBURN, J.** & SANSYZBAYEV, Y. 2006. Using a geographic information system to spatially investigate infectious disease. *In: TIBAYRENC, M. (ed.) Encyclopedia of Infectious Diseases: Modern Methodologies.* Hoboken, NJ, USA: John Wiley & Sons, Inc.

Edited Proceedings

BLACKBURN, J., MCNYSET, K., HUGH-JONES, M., MITCHELL, M. & CURTIS, A. 2007. Predicting the Geographic Distribution of *Bacillus anthracis*, the causative agent of anthrax, in Mexico Using Ecological Niche Modelling and Outbreak Data from the United States of America. *In: V Congresso Internacional de Epidemiologia, 10-13 October 2007, Vera Cruz, Mexico.* Pages: 425-432.

CURTIS, A., MILLS, J., **BLACKBURN, J.** & PINE, J. 2006. Hurricane Katrina: GIS response for a major metropolitan area. *Quick Response Research Report*, 180.

Book Reviews

BLACKBURN, J. K. 2010. A Review of "HIV/AIDS Global Frontiers in Prevention/Intervention". *Professional Geographer*, 62, 292-293.

CONTRACTS AND GRANTS

Ongoing Research Support

US Defense Threat Reduction Agency FRBAA14-6-2-0070.

Evaluating the ecology and persistence of *Brucella spp.* in livestock and wildlife in Kazakhstan and transmission potential to humans.

08/01/2017 – 07/31/2021

\$2.6 Million

In this project, we will (1) use molecular ecology and serology to investigate brucellosis prevalence rates and pathogen diversity in wildlife and mixed-species livestock herds; (2) quantify commingling between mixed livestock and livestock/wildlife using camera traps and GPS animal movement data from both groups; (3) use genotyping and GIS to identify animal sources of *B. melitensis* previously genotyped from humans via targeted surveillance; and (4) improve sustainable laboratory diagnostics in Kazakh human and animal health systems. We will also enhance detection/disease surveillance capabilities aligned with DTRA CBEP threat reduction goals, which will also improve overall biosurveillance in Kazakhstan.

NIH R01GM117617 J.K. Blackburn (PI) (Joint NSF/NIH EEID PROGRAM)

Spatio-temporally explicit estimation of R0 for pathogens with environmentally-mediated transmission

08/01/2015 – 07/31/2019

\$1.5 Million

In this project, we have devised a novel dynamical mathematical model to estimate R0 for environmentally maintained pathogens that allows use to determine the impact of infectious individuals (such as anthrax carcasses) from one year into the next allowing for long-term persistence. This allows us to model the disease as an SEIR process, with I individuals contributing to disease in future years or seasons. This model is spatially explicit, allowing us to measure the effect of climatic drivers on outbreak intensity. The model is process driven and can be adapted to several transmission systems, including *V. cholerae* and Chronic Wasting Disease.

DHS HSHQDC-16-C-B0012 J.K. Blackburn (PI)

Bacterial Population Genetics

06/01/2016 – 05/31/2019

\$1.4 Million

In this project, we are linking microbial and genetic characterization with ecological niche modeling to develop a global estimate of *Clostridium botulinum*, the bacteria responsible for botulism. This project links the SEER Lab GIS and modeling and microbiology capabilities with next generation sequencing at UTMB to map disease risk from this environmental pathogen.

Elk Research Council Grant, J.K. Blackburn (PI)

05/02/2016 – 05/02/2017

Estimating anthrax risk in captive elk using serology and ecological niche modeling

\$3861

In this project, we are employing serological sampling of captive elk from farms across the US and Canada to ground truth ecological niche model-based estimates of anthrax risk.

US DTRA J.K. Blackburn (PI)

09/01/2016 – 08/31/2018

Especially Dangerous Pathogen Differential/Rule-Out Elimination Assays (EDP-DREAM) of the Saiga Antelope Die-off

~\$58,000

In this project, we are using GPS collars, GIS and laboratory testing to assist in determining the cause of the severe saiga antelope die-off in Kazakhstan

US CDC (Fixed price contract) J.K. Blackburn (PI)
Modeling Anthrax in Ghana
9/15/2015 – 15 January 2017
\$135,000

In this project, we will employ ecological niche modeling and spatial analysis to define the geographic potential for *B. anthracis* pathogen persistence in Ghana to better estimate areas of high risk and environmental drivers of outbreaks.

Defense Threat Reduction Agency (Sub-award from Metabiota, Inc) J. Blackburn (PI)
Spatial epidemiology and spatial modeling of anthrax, tularemia, and Q-fever in the Republic of Georgia.

10/1/2015 – 11/15/2016

~\$90,000

In this project we employ GIS and spatial analysis to establish baselines for zoonoses across Georgia, with an emphasis on defining areas of pathogen persistence and climate drivers associated with outbreaks. We link spatio-temporal data, outbreak data, climate data, and phylogenetic data on the pathogens to improve our predictions of disease risk.

Past Funding

University of Florida (2009 – Present)

a. Funded Externally

Title: DEVELOPMENT AND ASSESSMENT OF GIS AND ECOLOGICAL NICH-BASED MODELING TOOLS FOR ESTIMATING SAMPLING SITES FOR BACILLUS ANTHRACIS

Funding Agency: Battelle Memorial Institute (Environmental Protection Agency Funds)

Effective Dates: 8/9/2009 – 6/30/2010

Total Funding: 90950.00

Role of Nominee: PI

Title: INTERGRATING PROGRAMMATIC GIS SUPPORT FOR CBR RESEARCH PROJECTS

Funding Agency: University of New Mexico – Joint University Partnership (Defense Threat Reduction Agency Funds)

Effective Dates: 8/1/2009 – 7/3/2010

Total Funding: 326741.00

Role of Nominee: PI

Title: PDA-GIS: INTEGRATING MOBILE MAPPING INTO ENVIRONMENTAL BIOTERRORISM DETECTION

Funding Agency: Science Applications International Corp. (Dept. of Homeland Security Funds)

Effective Dates: 10/1/2009 – 9/30/2010

Total Funding: 15000.00

Role of Nominee: PI

Title: JOINT UNIVERSITY PARTNERSHIP: BTRP-GIS CONTINUED INTEGRATION AND EXPANSION OF GIS AND SPATIAL EPIDEMIOLOGY

Funding Agency: University of New Mexico – Joint University Partnership (Defense Threat Reduction Agency Funds)

Effective Dates: 7/4/2010 – 7/3/2011

Total Funding: 503638.00

Role of Nominee: PI

Title: SYNTHETIC INFORMATION SYSTEMS FOR BETTER INFORMING PUBLIC HEALTH POLICYMAKERS

Funding Agency: Virginia Polytechnical Institute (NIH MIDAS Supplemental Funding)

Effective Dates: 9/1/2011 – 8/31/2013

Total Funding: 39718.00 (BUDGET YEAR 1 THRU 8/31/2012)

Role of Nominee: PI

Title: JOINT UNIVERSITY PARTNERSHIP: BTRP-GIS CONTINUED INTEGRATION AND EXPANSION OF GIS AND SPATIAL EPIDEMIOLOGY

Funding Agency: University of New Mexico – Joint University Partnership (Defense Threat Reduction Agency Funds)

Effective Dates: 7/4/2011 – 9/30/2013 (CONTINUATION OF PROJECT 00089763)

Total Funding: 383,669

Role of Nominee: PI

Title: EVALUATING BACILLUS ANTHRACIS SPORE PERSISTENCE AND CONCENTRATIONS FROM KNOWN ANTHRAX FOCI

Funding Agency: University of California Berkeley (Department of Energy Funds)

Effective Dates: 10/25/2011 – 4/30/2013

Total Funding: 44987.00

Role of Nominee: PI

Title: MAPPING PATHOGEN PATTERNS AND NICHES: SPATIO-TEMPORAL CLUSTERING OF ANTHRAX OUTBREAKS AND ECOLOGICAL MODELING OF *BACILLUS ANTHRACIS* IN KYRGYZSTAN

Funding Agency: CRDF Global (US Department of State Funds)

Effective Dates: 12/12/2012 – 12/11/2013

Total Funding: 32019.00 (A SUPPLEMENT IS FORTHCOMING IN NEXT FISCAL YEAR FOR ~13000.00 – described in budget detail)

Role of Nominee: PI

Title: MICROBIAL FORENSICS: STATISTICAL CONFIDENCE IN EVIDENTIARY MATERIAL BASED UPON BACTERIAL POPULATION GENETICS

Funding Agency: Northern Arizona University (Department of Homeland Security Funds)

Effective Dates: 7/1/2011 – 6/30/2012

Total Funding: 5307.00

Role of Nominee: PI in College/INVESTIGATOR ON GRANT

Title: SEAFOOD HYDROCARBON RESIDUES & COASTAL COMMUNITY HEALTH RISKS (PROJECT 3)

Funding Agency: National Institutes of Health (U-19 Award to J.G. MORRIS)

Effective Dates: 6/27/2011 – 4/30/2016

Total Funding: 5403.00 (YEAR 1 BUDGET)

Role of Nominee: PI in College/INVESTIGATOR ON GRANT

Title: DOCTORAL DISSERTATION RESEARCH: LINKING POPULATION GENETICS OF BACILLUS ANTHRACIS WITH SPATIO-TEMPORAL PATTERNS OF ANTHRAX IN NORTH AMERICAN WILDLIFE
Funding Agency: National Science Foundation (DDRI FOR J.C. MULLINS)
Effective Dates: 5/1/2012 – 10/31/2013
Total Funding: 7898.00
Role of Nominee: PI

Title: CNH-EX: WATER QUALITY AND ENVIRONMENTAL HEALTH IN BOTSWANA: COUPLED DYNAMICS IN A WATER-SCARE ENVIRONMENT
Funding Agency: Virginia Polytechnical Institute (NSF CNHS Funds)
Effective Dates: 6/1/2011 – 12/31/2013 (UF eNOA PENDING IRB EXEMPTION)
Total Funding: 12332.00
Role of Nominee: PI IN COLLEGE/ CO-PI AT NSF

Title: EPIDEMIOLOGY AND ENVIRONMENTAL RESERVOIRS OF MYCOBACTERIA IN FLORIDA
Funding Agency: 2010 Research Opportunity Seed Funds
Effective Dates: NA (Kane, PPHP)
Total Funding: 85,610.00
Role of Nominee: Served as investigator performing spatial and spatio-temporal analyses of NTM infections in humans 2006 – 2008 using ICD-9 codes. Worked with A. Kane and S. Yarnell (PhD candidate in MD/PHD Program). Also worked with Y. Qiu in Geography on database development for the analysis

Title: Modeling the environmental conditions associated with anthrax and the ecological niche of *Bacillus anthracis* in Australia
Funding Agency: Department of Environment and Primary Industries, Victoria Australia
Effective Dates: 8/16/2013 – 8/15/2016
Total Funding: 63263.00
Role of Nominee: PI

Title: AEP-GIS: Spatio-temporal modeling for infectious diseases in CBEP partner countries
Funding Agency: US Defense Threat Reduction Agency through the Penn State Academic Engagement Program (replaces JUP above)
Effective Dates: 10/1/2013 – 7/31/2014
Total Funding: 336,256
Role of Nominee: PI

Title: Rethinking EPA Bacillus anthracis/anthrax risk algorithms
Funding Agency: US EPA Through Battelle Contract
Effective Dates: 3/24/2014 – 8/31/2014
Total Funding: 22,131

Role of Nominee: PI

Title: AEP-GIS: Spatio-temporal modeling for infectious diseases in CBEP partner countries (YEAR 2)
Funding Agency: US Defense Threat Reduction Agency through the Penn State Academic Engagement Program (replaces JUP above)
Effective Dates: 8/1/2014 – 5/31/2014
Total Funding: 402,800 (Approximate budget)
Role of Nominee: PI

Title: Spatio-temporally explicit estimation of R0 for pathogens with environmentally-mediated transmission
Funding Agency: NIH R01GM117617
Effective Dates: 8/1/2015 – 7/31/2019
Total Funding: 1.53 Million (Approximate budget)
Role of Nominee: PI

Title: AEP-GIS: Spatio-temporal modeling for infectious diseases in CBEP partner countries (YEAR 2)
Funding Agency: US Defense Threat Reduction Agency through the Penn State Academic Engagement Program (replaces JUP above)
Effective Dates: 8/1/2014 – 9/30/2015
Total Funding: 326,000 (Approximate budget)
Role of Nominee: PI

Title: Spatial epidemiology and spatial modeling of anthrax, tularemia, and Q-fever in the Republic of Georgia
Funding Agency: US Defense Threat Reduction Agency through the Metabiota AEP
Effective Dates: 10/1/2014 – 5/15/2016
Total Funding: 96,000 (Approximate budget)
Role of Nominee: PI

Title: Ecology of anthrax and tularemia in Ukraine
Funding Agency: US Defense Threat Reduction Agency through the Metabiota
Effective Dates: 10/1/2014 – 5/15/2016
Total Funding: 125,000 (Approximate budget)
Role of Nominee: PI

Title: Ecology of anthrax and tularemia in Ukraine
Funding Agency: US Defense Threat Reduction Agency through the Metabiota
Effective Dates: 10/1/2014 – 5/15/2016
Total Funding: 125,000 (Approximate budget)
Role of Nominee: PI

Funding prior to appointment at University of Florida

2009 – Integrating GIS and PDA-GIS into field surveillance of *Bacillus anthracis* in the continental US. SAIC Corporation (\$15,000.00)

2009 – 2010 – Evaluating background levels of *Bacillus anthracis* in the environment: confirming ecological niche model estimates (*Funded*; \$89,000.00)

2008 – 2009 Expanding the GIS capabilities of the Center for GIS, CPQMHI, Tashkent, Uzbekistan and development of an international conference on GIS for disease surveillance and spatial epidemiology. US Civilian Research and Development Foundation (~\$89,000.00 *pending*)

2008 Integrating programmatic GIS support into the Cooperative Biological Research Program, Defense Threat Reduction Agency. Funded through the Joint University Partnership, University of New Mexico (CSUF component ~\$340,000.00 Jan 2008 – Apr 2009)

2007 Implementing GIS and Field Support for IDHS Environmental Bioterrorism Detection Program (Scientific Applications International Corporation, \$15,000.00)

2007 Spatial Ecology, Social Factors, and Epidemiology of Selected Bacterial Diseases in Kazakhstan and Uzbekistan. U.S. Civilian Research and Development Foundation (\$43,736.00)

2006 - 2007. Ecological and Socio-economic Factors of Anthrax Foci Activity and Improvement of its Diagnosis and Prophylaxis in Kazakhstan and Uzbekistan (A. Curtis, Co-PI, M. Hugh-Jones, Co-PI, JKB- PI/Project director (~\$165,000) by Civilian Research and Development Foundation.

2005 – 2006. Ecological and Socio-economic Factors of Anthrax Foci Activity and Improvement of its Diagnosis and Prophylaxis in Kazakhstan (A. Curtis, PI, M. Hugh-Jones, Co-PI, JKB- Co-PI (~\$89,000 per year) by Civilian Research and Development Foundation. 2004 – 2005. Evaluating reproductive and hatchling success of the Louisiana gopher tortoises. \$12,489 (to M.A. Mitchell, PI; JKB Co-PI) by Louisiana Department of Wildlife and Fisheries.

2004 – 2005. Expanding the delineation of shark nursery grounds in Louisiana to estuarine complexes east of the Mississippi River Delta. \$7,100 (B.A. Thompson, PI; JKB Co-PI) by the National Marine Fisheries Service COASTSPAN

2001 – 2002. Utilizing GIS, telemetry, and remote sensing to understand migratory fish movements in Louisiana: An interdisciplinary approach to defining Essential Fish Habitats. \$9,932.00 (B.A. Thompson, PI; JKB grant author/Co-PI) by the Louisiana Sea Grant College Program's Program Development Fund.

INVITED LECTURES

J.K. Blackburn. Linking Space, Time, and Genetics to Evaluate Indirect Pathogen Transmission in Wildlife. Inaugural Social Science & Medicine Speaker Series, University of Miami, 25 February 2016.

J.K. Blackburn. Examining spatio-temporal, phylogenetic, and ecological patterns of *Bacillus anthracis* and anthrax outbreaks. Pacific Northwest National Laboratories, Washington, 14 July 2015.

J.K. Blackburn. Applications of GIS to Emerging Zoonoses: Examining Spatio-Temporal and Ecological Patterns of Anthrax in Wildlife, Livestock and Humans. Geographic Perspectives on Health Mini Conference, Department of Geography, University at Buffalo, New York, 6 March 2015.

J.K. Blackburn. Applications of GIS in Emerging Zoonotic Processes. DIMACS MPE+2013. University of California, Berkeley, 20 May 2014.

J.K. Blackburn. Informing anthrax ecology with high resolution genotyping and ecological niche modeling. Geography Colloquium, Department of Geography, University of Florida, 2 February 2012.

J.K. Blackburn. Anthrax: An old world disease with modern implications, F. Maunsell, VEM 5571, 2 May 2012, University of Florida.

J.K. Blackburn. Modeling Spatio–Temporal, Genetic, and Environmental Patterns of Anthrax Outbreaks in Texas and Montana. National Environmental Monitoring Conference (NEMC) Geospatial Tools for Linking Monitoring and Modeling Symposium, Tuesday 7 August 2012, Washington DC.

J.K. Blackburn. Spatio-temporal patterns of anthrax outbreaks in wildlife: Examples from Chobe National Park, Western Montana, and West Texas. Virginia Tech Department of Wildlife Ecology, Evolution and Behavior Seminary Series, Thursday 11 October 2012, Blacksburg, VA.

J.K. Blackburn. Mapping anthrax and tracking elk: Using GIS and spatial modeling to understand wildlife disease from Montana to Botswana. GIS Day 2012, University of Florida, 14 November 2012.

J.K. Blackburn. Spatio-temporal patterns of anthrax outbreaks in wildlife: A multi-ecosystem perspective. Centre for Ecological and Evolutionary Synthesis, University of Oslo, 30 November 2012, Oslo, Norway.

J.K. Blackburn. Spatio-temporal patterns of anthrax in wildlife/livestock and humans: An update. Emerging Pathogens Institute External Review Board Meeting, Lake Wauberg Conference Building, 15 February 2013, University of Florida.

J.K. Blackburn. Anthrax in Wildlife: practical applications of spatial modeling, telemetry and ecology to disease Management. Wildlife, Ecology, and Conservation Department, University of Florida, 18 February 2013.

J.K. Blackburn. Mapping anthrax risk: examples of geospatial analysis for zoonoses. World-Wide Human Geography Data Working Group Meeting, US SOUTHCOM, Miami, Florida, 27 February 2012. *This meeting was hosted by The Geographer of the United States Department of State.*

J.K. Blackburn. Rethinking Anthrax Transmission and Outbreak Dynamics in the American West: Linking Epizootics with Ecology and Bacterial Genetics. Geography Colloquium, University of North Carolina Chapel Hill, 4 November 2011.

J.K. Blackburn. Ecological niche and species distribution models for understanding disease distributions: advances in models and their applications. Session on “The Ecology and Evolution of Human Infectious Diseases with an Environmental Reservoir (with a focus on plague)”. Center for Ecological and Evolutionary Synthesis (CEES), University of Oslo, Norway, 31 August 2011.

J.K. Blackburn. Ecological Niche and Species Distribution Modelling for Public Health: What are we modeling? What tools do we use? Keynote paper for a 90 minute Educational Session at URISA GIS in Public Health Conference, Atlanta, Georgia, June 30, 2011.

J.K. Blackburn. Anthrax in bison and deer. Texas Bison Association Annual Bison Conference, Austin, Texas, May 6-8, 2011.

J. K. Blackburn. Anthrax: An old world disease with modern implications, F. Maunsell, VEM 5571, 3 May 2011

Blackburn, J.K. and I.T. Kracalik. The Role of GIS in Disease Baseline. Cooperative Biological Engagement Program Annual Science Review, Garmisch, Germany, 17 March 2011.
Blackburn, J.K., Rakhimova, S., Foster, C.S., Nematov, A. Ecological Niche Models of Plague in Uzbekistan: Extracting biological information from multiple-species models vs. species specific models to understand hosts and vectors. Armed Forces Pest Management Board Meeting, JAX Naval Air Station, Jacksonville, Florida, 9 February 2010.

Blackburn, J.K. and Tatem, A.J. Climate change and disease. ALS 4921 Honors Seminar in IFAS. 5 November 2009.

Blackburn, J.K. Mapping anthrax: ecological niches, outbreak clusters, space-time, and good old fashion field investigations. Department of Geography Colloquia Series. 5 November 2009.

Blackburn, J.K. BTRP-GIS III: Spatial and Spatio-temporal Disease Baselines – GIS Methods for Understanding Disease Persistence. Biological Threat Reduction Program Scientific Review. 21 October 2009, Atlanta, Georgia.

Blackburn, J.K. Field validation of fundamental niche predictions of *Bacillus anthracis* for the U.S. and potential changes in the geographic distribution of *B. anthracis* in the U.S. in 2050. Emerging Pathogens Institute Seminar Series, University of Florida, 18 March 2009, Gainesville, Florida.

Blackburn, J.K. Role of Geographic Information Systems (GIS) in Surveillance and Outbreak Investigations. NATO Science for Peace and Security Programme Advanced Research Workshop Conference “Rapid Detection of Chemical, Biological, Radiological and Nuclear (CBRN) Agents or Weapons, and Rapid Diagnosis of the Effects on People” under the Workshop Title “Emerging and Endemic Pathogens: Advances in Surveillance, Detection, and Identification”. Tbilisi, Georgia, June 24 – 27, 2008.

Blackburn, J.K. GIS and Public Health: Mapping disease and response, improving decision making. MPH class, Department of Health Sciences, California State University, Fullerton, 7 May 2008.

Blackburn, J.K. CBR-GIS II: Forward progress towards spatial decision support, hypothesis-based analysis, and predictive modeling. 10th Anniversary Meeting, Biological Threat Reduction Program, Annual Meeting, Garmisch, Germany, 14 – 18 April 2008.

Blackburn, J.K. Integrating GIS and predictive ecological niche modeling to understand disease distributions with examples from anthrax and plague. Seminar, Department of Biological Sciences, California State University, Fullerton, 9 April 2008.

Blackburn, J.K. Reflections of Hurricane Katrina: Emergency operations and real-life disasters. Geography 450, California State University, Fullerton, 5 March 2008.

Utilizing predictive modeling and spatial hotspot analyses to evaluate the distribution, ecology, and outbreak persistence of *Bacillus anthracis* in North America and Central Asia. **Blackburn, J.K.** and Hugh-Jones M.E. Project Kr-1101 – Italy, USA, Kyrgyz Republic: International meeting on Anthrax Instituto Zooprofilattico Sperimentale della Puglia e della Basilicata September 10 – 15, 2007 AND “Assessment of Spatial Techniques of Pollution of the Territory of Kyrgyzstan by Anthrax Agents (First Stage), September 19 – 25, 2007, Bishkek, Kyrgyzstan.

Blackburn, J.K. Using ecological modeling, field methods, and statistics to evaluate anthrax ecology. Seminar in Environmental Studies Class, California State University, Fullerton, 19 September 2007.

Blackburn, J.K. Integrating spatial analysis and ecological modeling into disease surveillance and research across CBR: moving towards a hypothesis-testing paradigm with GIS and GISc. CBR Program Review, April 2 -6, 2007, Garmisch, Germany.

Utilizing predictive models to evaluate the distribution and ecology of *Bacillus anthracis* in North America and Central Asia. **Blackburn et al.** Agents of Bioterrorism Symposium. International Meeting on Emerging Diseases and Surveillance, Vienna, Austria, February 23 – 25, 2007.

Blackburn, J.K. Modeling the geographic distribution of *Bacillus anthracis* and examining ecological components of potential transmission pathways. 7 November 2006. National Center for Foreign

Animal and Zoonotic Disease Defense, and the Department of Rangeland Ecology and Management, Texas A&M University.

Blackburn, J.K. Evaluating disease distributions and transmission cycles at multiple geographic scales: a case study of anthrax in the United States. 22 September 2006, GeoForum Seminar Series, University of Southern Mississippi.

Blackburn, J.K. Geographic Information System Technologies: Integrating spatial data into disease surveillance, reporting, and analyses. 25 January 2006, DTRA/CBR Annual Collaborators Review Meeting, Smiley, Virginia.

Blackburn, J.K. GIS projects of the LSU World Health Organization Collaborating Center. Louisiana GIS Council. October Meeting, Baton Rouge, LA 2004.

Blackburn, J.K. Geospatial techniques for analyzing pelagic fish distributions in the Gulf of Mexico. Invited seminar for the National Shark Consortium-Florida Program for Shark Research, Florida Museum of Natural History, University of Florida, Gainesville. September 2004

Blackburn, J.K. An introduction and an overview of Geographic Information Systems, spatial modeling, and spatial analysis: Applications and case studies in marine fisheries. Annual meeting of the American Elasmobranch Society, Graduate Student Workshop, July 2002, Kansas City, MO.

CONFERENCE PAPERS

*Bell, L.K., Zhunushov, **Blackburn, J.K.** Spatial patterns and ecological factors associated with livestock anthrax in Osh, Kyrgyzstan. URISA GIS in Public Health Conference, Miami, FL 17-20 June 2013.

Bezymennyi, M., Skrypnyk, A., Skrypnyk, V., Romanenko, O., Pysarenko, R., Goodin, D., Glass, G., **Blackburn, J.K.** Mapping anthrax outbreaks in animals in Ukraine over the last 90 years. URISA GIS in Public Health Conference, Miami, FL 17-20 June 2013.

Blackburn, J.K., *Morris, L.R. Informing zoonosis surveillance with animal movement ecology: tracking elk during the Montana anthrax risk period. URISA GIS in Public Health Conference, Miami, FL 17-20 June 2013.

Blackburn, J.K., *Morris, L.R., Bagamian, K.H., Asher, V. Informing zoonosis surveillance with animal movement ecology: tracking elk during the Montana anthrax risk period. Bacillus ACT Conference, Victoria, British Columbia, 1-5 September 2013.

Blackburn, J.K. and Goodin, D.G. Differentiation of springtime vegetation indices associated with summer anthrax epizootics in West Texas deer. URISA GIS in Public Health Conference, Miami, FL 17-20 June 2013.

Blackburn, J.K. and Goodin, D.G. Differentiation of springtime vegetation indices associated with summer anthrax epizootics in West Texas deer: a first step toward predicting outbreaks early. Bacillus ACT Conference, Victoria, British Columbia, 1-5 September 2013.

Blackburn, J.K., Ponciano, J.M., Zhunushov, A. Spatial and temporal patterns of human and livestock brucellosis in Kyrgyzstan. 66th Annual Brucellosis Research Conference, 7-8 December 2013, Chicago, IL.

Kracalik, I.T., Malania, L., Tsertsvadze, N., Bakanidze, L., Imnadze, P., Tsanova, S., Manvelyan, J., **Blackburn, J.K.** 2013. Epidemiology of human cutaneous anthrax in the country of Georgia 2010 – 2012. American Public Health Association Conference, Boston, 2-6 November 2013, Boston, Massachusetts.

Malania, L., Kracalik, I.T., Tsertsvadze, N., Manvelyan, J., Bakanidze, L., Imnadze, P., Tsanova, **Blackburn, J.K.** Analyzing Human Cutaneous Anthrax at the Rural/Urban Interface in the Country of Georgia. URISA GIS in Public Health Conference, Miami, FL 17-20 June 2013.

*Morris, L.R., **Blackburn, J.K.**, Talibzade, A., Kracalik, I., Abdullayev, R. Measuring inter-annual dynamics of the Trans-Caucasian lowland plague focus in Azerbaijan using historical maps and spatial-temporal analysis of moving polygons (STAMP). URISA GIS in Public Health Conference, Miami, FL 17-20 June 2013.

*Mullins, J.C., Van Ert, M. Hadfield, T., Nikolich, M.P., Hugh-Jones, M.E., **Blackburn, J.K.** Integrating high resolution genotyping and spatio-temporal analysis to understand anthrax ecology in North American wildlife. URISA GIS in Public Health Conference, Miami, FL 17-20 June 2013.

Omasheva, G., Aikimbayev, A., Zhandossov, Sh., Tuleov, A., Hagius, S., Elzer, P., Nikolich, M.P., **Blackburn, J.K.** Brucellosis in Kazakhstan. 66th Annual Brucellosis Research Conference, 7-8 December 2013, Chicago, IL.

Sadovskaya, V.P., Atshabar, B.B., Kazakov, S.V., Burdelov, L.A., Zhumadilova, Z.B., Syzdykov, M.S., **Blackburn, J.K.** Employing GIS and spatial analysis to inform plague surveillance in Kazakhstan. URISA GIS in Public Health Conference, Miami, FL 17-20 June 2013.

Skrypnyk, A., Skrypnyk, V., Nikolich, M.P., Farlow, J., Bagamian, K.H., **Blackburn, J.K.** Anthrax in a backyard domestic dog in Ukraine: a case report. Bacillus ACT Conference, Victoria, British Columbia, 1-5 September 2013.

Syzdykov, M.S., Kuznetsov, A.N., Sadovskaya, V.P., **Blackburn, J.K.** Spatial analysis of the brucellosis distribution in southeastern Kazakhstan using GIS technologies. URISA GIS in Public Health Conference, Miami, FL 17-20 June 2013.

Syzdykov, M.S., Kuznetsov, A.N., Huang, X., Elzer, P.H., Espembetov, B.A., Daulbayeva, S.F., **Blackburn, J.K.**, Nikolich, M.P. Evaluation of spatial patterns of brucellosis in southern Kazakhstan using GIS technologies. 66th Annual Brucellosis Research Conference, 7-8 December 2013, Chicago, IL.

Sytnik, I., Tyulegneov, S., Karibayev, T., Dzhaibekova, A., Shcherbakov, A., Seidakhmetova, R., Abenova, A., Nikolich, M., Elzer, P., **Blackburn, J.K.**, Huang, X. Ecology of *Brucella* biotypes in southern Kazakhstan. 66th Annual Brucellosis Research Conference, 7-8 December 2013, Chicago, IL.

Rita Ismayilova, Ian T. Kracalik, Rakif Abdullayev, Narmin Ustun, Aydin Talibzade, **Jason K. Blackburn**. The Status of Zoonoses in Azerbaijan during Soviet and Post-Soviet Governance: Analyzing Space-Time patterns of Human Brucellosis and Anthrax. International Convention on Infectious Diseases (ICID), Thailand, June 2012.

Ayden Talibzade, Ian Kracalik, Rakif Abdullayev, Rita Ismayilova, Narmin Ustun, and **Jason K. Blackburn**. Identifying areas of plague habitat in Azerbaijan: Comparing ecological modeling

techniques to provide a better estimation of geographic suitability. DTRA Annual Science Review, Istanbul, Turkey, September 2012.

Blackburn, J.K., et al. Mapping hotspots of anthrax and genetic diversity of *Bacillus anthracis* in Azerbaijan. Annual Meeting of the American Society for Tropical Medicine and Hygiene, Atlanta, Georgia, November 2012.

Morris, L.R.*; **Blackburn, J.K.**, Kracalik, I.T., Talibzade, A., Abdullayev, R. Measuring inter-annual dynamics of the Trans-Caucasian Low-land Plague Focus in Azerbaijan using historical maps and Spatial-Temporal Analysis of Moving Polygons (STAMP). Annual Meeting of the American Society for Tropical Medicine and Hygiene, Atlanta, Georgia, November 2012.

Kliment Asadov, Ian Kracalik, Mehriban Baghirova, Mazahir Shikhiyev, **Jason K. Blackburn** Spatial patterns of livestock brucellosis in Azerbaijan 2002 to 2010. Brucellosis Research Conference, Chicago, IL, December 1,2, 2012.

J. Blackburn, M. Nikolich, P. Elzer, X. Huang, G. Omasheva, A. Aikimbayev. Results and Prospects of Brucellosis Research in Kazakhstan. Brucellosis Research Conference, Chicago, IL, December 1,2, 2012.

Ian Kracalik, Nikoloz Tsertsvadze, Lela Bakanidze, Paata Imnadze, Lile Malania, Shota Tsanova, Julietta Manvelyan², and **Jason K. Blackburn**. Evidence of local clustering of human anthrax in the country of Georgia associated with environmental and anthropogenic factors. Annual Meeting of the American Society for Tropical Medicine and Hygiene, Atlanta, Georgia, November 2012.

Blackburn, J.K., D. Hunter, T.L. Hadfield, M. Van Ert, J.C. Mullins, D. Goodin, M.E. Hugh-Jones. 2012. Spatio-temporal and genetic patterns of anthrax outbreaks in Texas and Montana. EPI Research Day, University of Florida, 23 February 2012.

Hightower, J., **J.K. Blackburn**, D. Goodin, N. Vidyako. 2012. Spatial and ecological niche models for tularemia hosts and vectors in Ukraine. EPI Research Day, University of Florida, 23 February 2012.

Kracalik, I.T., **J.K. Blackburn**, L. Lukhnova, Y. Pazilov, A. Aikimbayev. 2012. Analyzing the spatial patterns of anthrax in Kazakhstan in Relation to Environmental Factors. EPI Research Day, University of Florida, 23 February 2012.

J.C. Mullins, L. Lukhnova, A. Aikimbayev, M. Van Ert, **J.K. Blackburn**. 2012. Ecological niche modeling of the *Bacillus anthracis* A1.a sub-lineage in Kazakhstan. EPI Research Day, University of Florida, 23 February 2012.

Abdullayev, R., Ismayilova, N. Ustun, A. Talibzade, S.E. Racz, I.T. Kracalik, **J.K. Blackburn**. Analyzing the spatial and temporal patterns of human brucellosis in Azerbaijan during the period 1983 to 2009: A comparison of gridded population data and smoothing techniques. Brucellosis 2011 International Research Conference, Puerto Madero, Buenos Aires, Argentina, September 21-23, 2011.

Syzdykov, M.S., B.B. Atshabar, S.V. Kazakov, A.N. Kuznetsov, T.A. Grushina, S.F. Daulbaeva, **J.K. Blackburn**, S. Mizanbayeva. Development of a GIS-based surveillance system to monitor human brucellosis in Kazakhstan. Brucellosis 2011 International Research Conference, Puerto Madero, Buenos Aires, Argentina, September 21-23,2011.

T. Grushina, P. Elzer, **J.K. Blackburn**, X.Huang, B. Atshabar, O. Karpova, M. Syzdykov, S. Daulbayeva, A. Kuznetsov, K. Ospanov, S. Kazakov, S. Mizanbayeva, D. Akzholtaeva, G. Mukhamadiyanova, G. Kalykova, T. Karibayev, S. Tyulegenov, D. Berezovskiy, M. Nikolich. Evaluation

of Multiple-Locus Variable-Number Tandem-Repeat Analysis Method for Genotyping Human *Brucella* isolates in Kazakhstan. Brucellosis 2011 International Research Conference, Puerto Madero, Buenos Aires, Argentina, September 21-23, 2011.

Onashvili, E. Mamisashvili, M. Nikoaishvili, I. Beradze, M. Zakareishvili, M. Donduashvili, M. Kokhreidze, N. Vepkhvadze, T. Tighilauri, K. Goginashvili, G. Osiashvili, L. Kerdzevadze, P. Elzer, **J.K. Blackburn**. Clinical, epidemiological, and laboratory based assesement of brucellosis in Georgia. American Society for Microbiology 10th ASM Biodefense and Emerging Diseases Research Meeting, 26-29 February 2012, Washington DC.

Abdullayev, R., Ismayilova, N. Ustun, A. Talibzade, I.T. Kracalik, **J.K. Blackburn**. Spatio-temporal patterns of emerging human brucellosis clusters in Azerbaijan during the period 2000 to 2010 using varying baseline expectations of occurrence. American Society of Tropical Medicine and Hygiene Annual Meeting, 4-8 December 2011, Philadelphia, Pennsylvania.

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Christopher Shane Foster¹, Shahlo Rakhimova², Jason K. Blackburn¹, Amijan Nematov². **Combining GIS and ecological niche modeling approaches to improve distribution estimates for plague reservoirs in Uzbekistan.** URISA GIS and Health Conference, Providence Rhode Island, June 2009.

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UNIVERSITY GOVERNANCE AND SERVICE

College – 2012 – 2014 – College Curriculum Committee, Member

Department – 2013 – Departmental Bylaws Committee, Chair

Department – 2014 – Medical Geography in Global Health Undergraduate Major Development Committee, Chair

Department – 2014 – Departmental Curriculum Committee, Member

Emerging Pathogens Institute – Haiti Laboratory Steering Committee, Member

College of Veterinary Medicine – Dean Search Committee Member, EPI representative

College – Veterinary School's Virology Leader Search committee member (2010-11); Search committee member for Animals Sciences' *E. coli* faculty position (2010-11)

Department/Center – Internship advisor for PHHP MPH Student M. Wilson (2010-2011) hosted at Emerging Pathogens Institute;

University – Search committee member of the nationwide CIO Search (Fall/Spring 2010)

Departmental Faculty Merit Raise Review Committee (2010)

EDITOR OF A SCHOLARLY JOURNAL, SERVICE ON AN EDITORIAL ADVISORY BOARDS, REVIEWER FOR SCHOLARLY JOURNALS

Editorial Advisory Boards

Geospatial Health (September 2011 – present)

Southeastern Geographer (January 2012 – present)

Reviewer for Scholarly Journals

Emerging Infectious Diseases, PLoS One, Proceedings of the National Academy of Sciences, Oryx, Journal of Applied Ecology, Journal of Zoo and Wildlife Medicine, Journal of the American Society for Tropical Medicine and Hygiene, Public Health and Zoonoses, Journal of Medical Entomology, Methods in Ecology and Evolution