

## RESUME

**Oscar J Benitez, DVM, PhD**

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### OFFICE CONTACT INFORMATION

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### Profile

- Large animal veterinarian with 9 years of practical experience in beef cattle herd management, clinics, surgery, and reproductive biotechnologies
- Research experience in infectious disease epidemiology, with advanced skills in statistical analysis and field trials
- Excellent ability to manage multiple projects and to work in teams with people from different backgrounds

### Education

2016- 2019 **PhD in Comparative Medicine and Integrative Biology.** Department of Large Animal Clinical Science, College of Veterinary Medicine, Michigan State University – East Lansing, MI, USA  
Dissertation advisor: **Dr. Paul Bartlett, BA, MPH, DVM, PhD**  
Dissertation title: BLV in Beef Cattle: Sexual Transmission and Cow Survivability

2004-2011 **Doctor of Veterinary Medicine (DVM).** Universidad de la Salle –Bogota, DC, Colombia

### Employment Experience

2020 - **Postdoctoral fellow** - Department of Physiology, School of Medicine, Wayne State University – Detroit, MI, USA

Mentor: Donal O’Leary PhD

#### **Area:** Cardiovascular Physiology

- Develops research determining the roles of the arterial reflexes in response to ischemia of active skeletal muscle in the control of the cardiovascular system in normal and pathophysiological states such as congestive heart failure
- Assists and conducts full-length experiments on the evaluation of arterial blood pressure, heart rate, cardiac output, and regional blood flow during exercise
- Data analysis of large datasets on cardiovascular parameters
- Trains large animal models for studies during exercise performance
- Assists at open-heart surgeries for surgical instrumentation in dogs (i.e. pacemaker, arterial occluders) and performs post-operative care
- Performs necropsies post-experiments

2016-2019 **Graduate Research Assistant** - Department of Large Animal Clinical Science, College of Veterinary Medicine, Michigan State University – East Lansing, MI, USA Michigan State University

Mentors: Dr. Paul Bartlett and Dr. Daniel Grooms, Bovine Leukemia Virus Laboratory (BLV)

#### **Area:** Epidemiology and control of infectious diseases in food animals

- Designed and performed field trials on the transmission of BLV in beef and dairy cattle

- Visited and obtained blood, nasal swabs, and semen samples in over 50 cattle farms across the US
- Found novel evidence of BLV in genital secretions in breeding beef bulls and examined the potential of BLV transmission during natural breeding
- Contributed to determine the impact of BLV infection on cow longevity and herds' profitability in dairy and beef farms
- Contributed to estimate prevalence of lymphocytosis in BLV-infected beef cattle and its use as a measurement of disease progression

2015-2016 **Research Associate** - Department of Large Animal Clinical Science, College of Veterinary Medicine, Michigan State University – East Lansing, MI, USA

Mentors: Dr. Daniel Grooms and Lorraine Sordillo, Bovine Leukemia Virus Laboratory (BLV) and Meadow Brook Immunobiology Laboratory

**Project:** Control of BLV in dairy herds by identifying and removing cows with the highest proviral load and lymphocyte counts

- Performed blood sample collections in more than 3000 cows from 29 beef farms in Michigan
- Trained veterinary students on blood collection in cattle and sample processing
- Performed over 250 breeding soundness examinations in beef bulls from 39 farms across the US
- Developed new techniques for DNA extraction from biological samples
- Performed BLV diagnosis by PCR analysis

### **Veterinarian Specialist**

2011-2015 Beef Farms: Sabaneta, El Brasil, and La Palestina, San Alberto, Cesar, Colombia

- Performed preventive medicine, reproductive management, and animal clinical care
- Performed more than 500 *in vivo* embryo transfers resulting in more than 300 pure breed Brahman calves over a two-year period

### **Veterinary Intern**

03-10/2010 Santa Clara Genetics, Cascavel, Paraná, Brazil

Mentor: Dr. Jairo Frare DVM

- Trained in ovum pick-up, embryo flushing and ultrasound pregnancy diagnosis in 12 distinct beef farms in southern and central states in Brazil and Paraguay

08-12/2009 Large Animal Clinics and Surgery, Universidad Austral de Chile, Valdivia, Chile

Mentor: Dr. Bruno Menarim DVM, MS, PhD

- Assisted in bovine/equine clinical care: fluid therapy, pre and post-operative care, blood sampling, management of patients' charts, and filling prescriptions
- Performed pre-surgical diagnostic lab tests and assisted the surgeon in orthopedics and GI equine surgery
- Responsible by maintaining surgical equipment, pre-operative care and scrubbing

### **Peer Reviewed Publications**

1. **Benitez, Oscar. J.**, Norby, B., Bartlett, P. C., Maeroff, J. E., & Grooms, D. L. (2020). Impact of bovine leukemia virus infection on beef cow longevity. Preventive Veterinary Medicine, Volume 181, August 2020, 105055. <https://doi.org/10.1016/j.prevetmed.2020.105055>

2. **Benitez, Oscar J.**, Roberts, Jennifer., Norby, Bob., Bartlett, Paul C., Grooms, Daniel L. " Lack of Bovine leukemia virus transmission during natural breeding of cattle." *Theriogenology*, 126 (2019): 187-190. <https://doi.org/10.1016/j.theriogenology.2018.12.005>
3. **Benitez, Oscar J.**, Roberts, Jennifer., Norby, Bob., Bartlett, Paul C., Takeshima, Shin-nosuke., Aida, Yoko., Grooms, Daniel L. "Breeding Bulls as a Source of Bovine Leukemia Virus for Beef Herds." *Journal of the American Veterinary Medical*, 254:11 (2019), 1335-1340. <https://doi.org/10.2460/javma.254.11.1335>
4. Ruggiero, V. J., Norby, B., **Benitez, Oscar J.**, Hutchinson, H., Sporer, K. R. B., Droscha, C., ... & Bartlett, P. C. (2019). Controlling bovine leukemia virus in dairy herds by identifying and removing cows with the highest proviral load and lymphocyte counts. *Journal of dairy science*, 102:10 (2019), 9165-9175. <https://doi.org/10.3168/jds.2018-16186>
5. Ruggiero, Vickie J., **Benitez, Oscar J.**, Yun-Long Tsai., Pei-Yu Alison Lee., Chuan-Fu Tsai., Yu-Chun Lin., Hsiao-Fen Grace Chang., Hwa-Tang Thomas Wang., Bartlett, Paul C. "On-site detection of bovine leukemia virus by a field-deployable automatic nucleic extraction plus insulated isothermal polymerase chain reaction system." *Journal of virological methods*, 259 (2018): 116-121. <https://doi.org/10.1016/j.jviromet.2018.06.008>
6. Frie, Meredith C., Kelly RB Sporer., **Benitez, Oscar J.**, Joseph C. Wallace., Casey J. Droscha., Paul C. Bartlett., and Paul M. Coussens. "Dairy cows naturally infected with bovine leukemia virus exhibit abnormal B-and T-cell phenotypes after primary and secondary exposures to keyhole limpet hemocyanin." *Frontiers in veterinary science* 4 (2017): 112. <https://doi.org/10.3389/fvets.2017.00112>

#### **Manuscripts in submission**

1. **Benitez, Oscar J.**, Norby, B., Bartlett, P. C., & Grooms, D. L. (2020). The Impact of Bovine Leukemia Virus on Dairy Longevity. Under review.

#### **Oral presentations in Scientific Meetings**

2. **Benitez, Oscar J** Bo Norby, Paul C. Bartlett, Daniel L. Grooms, Effect of Bovine Leukosis Virus on Beef Cow Longevity. 99th Annual Conference of Research Workers in Animal Diseases (CRWAD), Chicago, Illinois, US, 2018.
3. **Benitez, Oscar J**, Bo Norby, Paul C. Bartlett, Daniel L. Grooms. The role of breeding bulls in Bovine Leukemia Virus transmission. Phi Zeta Research day, College of Veterinary Medicine. MSU, 2018.
4. **Benitez, Oscar J**, Jennifer Roberts, Bo Norby, Paul C. Bartlett, Daniel L. Grooms, Bulls as a Source of Bovine Leukemia Virus During Natural Breeding. 51th Annual Conference of the American Association of Bovine Practitioners, Phoenix, Arizona, US, 2018.
5. **Benitez, Oscar J**, Jennifer Roberts, Bo Norby, Paul C. Bartlett, Shin-nosuke Takeshima, Yoko Aida, Daniel L. Grooms, Breeding beef bulls as a source of BLV transmission. 50th Annual Conference of the American Association of Bovine Practitioners, Omaha, Nebraska, US, 2017.
6. **Benitez, Oscar J**, Jennifer Roberts, Bo Norby, Paul C. Bartlett, Shin-nosuke Takeshima, Yoko Aida, Daniel L. Grooms. The role of breeding bulls in Bovine Leukemia Virus transmission. Phi Zeta Research day, College of Veterinary Medicine. MSU, 2017.

#### **Posters:**

1. **Benitez, Oscar J**, Jacqueline Maeroff, Colleen Curtiss, Paul Bartlett, Daniel Grooms. Bovine Leukemia Virus prevalence and lymphocyte count in female beef cattle. Phi Zeta Research day, College of Veterinary Medicine. MSU, 2016.

## **Academic Awards**

2017      First Place, American Association of Bovine Practitioners AABP, Graduate Student Oral Presentation

## **Strengths and skills:**

### **Languages**

- Spanish: Native language
- English: Fluent (speaking, reading, writing)
- Portuguese: Fluent (speaking and reading; intermediate writing)

### **Data Analysis and Softwares**

- Advance Statistical language (SAS and Stata)
- Advance Microsoft office (Outlook, PowerPoint, Excel, and Word)
- Advance Adobe software (Acrobat, Photoshop)

### **Character/ Interpersonal:**

- **Adaptable:** Experience working with people from a diversity of backgrounds and cultures
- **Persistent:** Completed a task even when it was more challenging than expected
- **Problem-solving and decision-making:** Applied successful and creative solutions when troubleshooting in laboratory techniques and challenging situations during applied research with dairy and beef cows
- **Organized:** Managed simultaneous multiple projects and sample analyzes
- **Detail-oriented:** Manipulated large pieces of data and samples with accuracy and focus
- **Communicative:**
  - Confident, articulate, and professional speaking abilities and experience
  - Speaking in public to groups, or via electronic
  - Empathic listener and persuasive speaker
  - Wrote scientific and technical papers and reports
- **Collaborative/ team-worker:**
  - Worked effectively on planning and execution of research projects with other professors, graduate students and postdocs within the same laboratory, department and in interdepartmental collaborations
  - Trained undergraduate and veterinary students in a variety of procedures and tests in the laboratory and on-farm, and mentored the students on the development of Summer research projects and on writing of scientific documents

## **References**

### **Daniel Grooms DVM, PhD - Dean at Iowa State University - College of Veterinary Medicine**

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### **Paul Bartlett BA, MPH, DVM, PhD - Associate Professor - Epidemiology and disease surveillance**

College of Veterinary Medicine - Michigan State University

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### **Lorraine M. Sordillo, BS MS PhD - Endowed Professor - Meadow Brook Chair in Farm Animal Health**

College of Veterinary Medicine - Michigan State University

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