

# SANTIAGO BAS

DVM, PhD

*Curriculum Vitae*

## Business Address

Department of Veterinary Preventive Medicine  
The Ohio State University  
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## EDUCATION AND TRAINING

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1999-2005 DVM. Graduated from Catholic University of Córdoba. Cordoba, Argentina.

2007 - 2008 Research Associate, Dairy Science, University of Wisconsin Madison. Madison, Wisconsin.

2009-2013 Doctor of Philosophy. Department of Veterinary Preventive Medicine, The Ohio State University. Columbus, Ohio.

2013-Present Assistant Professor – Clinical. Department of Veterinary Preventive Medicine, The Ohio State University. Columbus, Ohio.

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## WORKING EXPERIENCE

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2003 Internship at “Estancia el Centenario”. Villa Mercedes, San Luis.

2004-2005 Internship at “Estancia San Pedro”. Coronel Pringles, Buenos Aires, Argentina.

2005 Internship organized by Catholic University of Córdoba at Jockey Club Córdoba Racecourse. Cordoba, Argentina.

2005 Internship assisting veterinary activities in Dpt. San Justo, related to comprehensive attention of dairy cattle. Balnearia, Cordoba, Argentina.

2006-2007 Veterinary private practice in Dpto. San Justo, related to dairy cattle production systems. Balnearia, Cordoba, Argentina.

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## **CERTIFICATIONS**

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- 2009 - 2011 Ohio Dairy Health and Management Certificate Program. The Ohio State University. Columbus, Ohio.
- 2012 International Certificate Program for Dairy and Beef Veterinary Practitioners. The Ohio State University. Columbus, Ohio.

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## **RELEVANT SKILLS**

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1. Direct collaboration with food animal veterinarians, dairy producers and personnel on planning, executing, and outcome monitoring of management strategies in dairy herds.
2. Dairy transition management including disease prevention, diagnosis, development of protocols.
3. Dairy personnel training
4. Hormone analyses including progesterone, estradiol and luteinizing hormone.
5. Microbiological milk sample testing in compliance with National Mastitis Council guidelines.
6. Evaluation of milking routine practices and milking system evaluation in compliance with National Mastitis Council guidelines.
7. Bovine transrectal ultrasonography.
8. Software: Microsoft office (Word, Excel, PowerPoint). Dairy comp 305. PCDART. SAS statistical software.
9. Communication: Fluent in Spanish and English.

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## **AWARDS and HONORS**

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1. ADSA Production Poster PhD Competition: 3rd place. 106<sup>th</sup> Annual Meeting of the American Dairy Science Association. July, 2011. New Orleans, Louisiana.
2. Graduate Student Seminar Series: Best graduate student presentation awards for the autumn graduate student seminar series. November, 2012. Columbus, Ohio.
3. Ohio Penal Industries Certificate of Appreciation for dedication to excellence. March 2014 Columbus, Ohio.

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## **RESEARCH FUNDING**

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1. Select Sires Inc. **\$ 5,500**  
Grant Proposal Title: Evaluation of LH Release and Ovulatory Response Following Intrauterine GnRH Analogue Administration in Lactating Dairy Cows. Principal Investigator: Schuenemann G.M. Department of Veterinary Preventive Medicine. College of Veterinary Medicine. The Ohio State University. Role: Co-Investigator. Description of Effort: Assisted with experimental design, budget preparation, logistics of research project and grant writing. Timeline: 2011-2012.
2. Ohio Dairy Research Funds **\$ 4,000**  
Grant Proposal Title: Creating the next generation of cow-care standards for transition cow diseases by assessing daily cow activity. Principal Investigator: Schuenemann

G.M. Department of Veterinary Preventive Medicine. College of Veterinary Medicine. The Ohio State University. Role: Co-Investigator. Description of Effort: Assisted with experimental design, and grant writing. Timeline: 2012.

3. Ohio Dairy Research Funds **\$5,770**  
Grant Proposal Title: Effect of Metritis on Physiological and Behavioral Responses in Lactating Dairy Cows. Principal Investigator: Bas S. Department of Veterinary Preventive Medicine. College of Veterinary Medicine. The Ohio State University. Role: Principal Investigator. Description of Effort: Experimental design, and grant writing.
4. Ohio Dairy Research Funds **\$3,550**  
Proposal Title: Assessment of Pain Therapy to Improve the Welfare of Dairy Cows that Experience Dystocic Births in Dairy Herds. Department of Veterinary Preventive Medicine. College of Veterinary Medicine. The Ohio State University. Role: Principal Investigator. Description of Effort: Experimental design, and grant writing.

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## PEER-REVIEW PUBLICATIONS

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1. Schuenemann GM, **Bas S**, Workman JD, Rajala-Schultz PJ. Dairy reproductive management: assessing a comprehensive continuing education program for veterinary practitioners. *J Vet Med Educ*. 2010 Fall; 37(3):289-98.
2. **Bas S**, Hoet A, Rajala-Schultz P, Sanders D, Schuenemann GM. The use of plastic cover sheaths at the time of artificial insemination improved fertility of lactating dairy cows. *J Dairy Sci*. 2011 Feb; 94(2):793-9.
3. Schuenemann GM, Eastridge ML, Weiss WP, Workman JD, **Bas S**, and Rajala-Schultz P. 2011. Dairy Nutrition Management: Assessing a Comprehensive Continuing Education Program for Veterinary Practitioners. *J Dairy Sci*. 2011 May;94(5):2648-56.
4. Schuenemann GM, Nieto I, **Bas S**, Galvão KN, Workman J. Assessment of calving progress and reference times for obstetric intervention during dystocia in Holstein dairy cows. *J Dairy Sci*. 2011 Nov; 94(11):5494-501.
5. Giordano JO, Wiltbank MC, Guenther JN, Pawlisch R, **Bas S**, Cunha AP, Fricke PM. Increased fertility in lactating dairy cows resynchronized with Double-Ovsynch compared with Ovsynch initiated 32 d after timed artificial insemination. *J Dairy Sci*. 2012 Feb;95(2):639-53.
6. Brick TA, Schuenemann GM, **Bas S**, Daniels JB, Pinto CR, Rings DM, Rajala-Schultz PJ. Effect of intrauterine dextrose or antibiotic therapy on reproductive performance of lactating dairy cows diagnosed with clinical endometritis. *J Dairy Sci*. 2012 Apr;95(4):1894-905.
7. **Bas S**, Pinto CG, Day ML, Schuenemann GM. 2012. Effect of intrauterine administration of gonadotropin releasing hormone on serum LH concentrations in lactating dairy cows. *Theriogenology*. 2012 Oct 1;78(6):1390-7.
8. Schuenemann GM, **Bas S**, Gordon E, Workman JD. Dairy calving management: description and assessment of a training program for dairy personnel. *J Dairy Sci*. 2013 Apr;96(4):2671-80.

9. Giordano JO, Wiltbank MC, Fricke PM, **Bas S**, Pawlisch R, Guenther JN, Nascimento AB. 2013. Effect of increasing GnRH and PGF2 $\alpha$  dose during Double-Ovsynch on ovulatory response, luteal regression, and fertility of lactating dairy cows. *Theriogenology*. 2013 Oct 15;80(7):773-83.
10. **Bas S**, Maquivar MG, Coutinho da Silva MA, Day ML, Daglio MC; Harguindeguy S, Titler M, Schuenemann GM. Effect of Intrauterine Administration of Gonadotropin Releasing Hormone with Glycerol on Serum LH Concentrations in Lactating Dairy Cows. *Anim Reprod Sci*. 2014 145(1-2):15-22.
11. Titler M, Maquivar MG, **Bas S**, Rajala-Schultz PJ, Gordon E, McCullough K, Federico P, Schuenemann GM. Prediction of parturition in Holstein dairy cattle using electronic data loggers. *J Dairy Sci*. 2015 Aug;98(8):5304-12

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#### PEER-REVIEW ABSTRACTS

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1. A.P. Cunha, J.N. Guenther, M.J. Maroney, J.O. Giordano, A.B. Nascimento, **S. Bas**, H. Ayres, M.C. Wiltbank. Effects of high vs. low progesterone concentrations during Ovsynch on double ovulation rate and pregnancies per AI in high producing dairy cows. *J. Anim. Sci.* Vol. 86, E-Suppl. 2/*J. Dairy Sci.* Vol. 91, E-Suppl. 1.
2. J. O. Giordano, M. C. Wiltbank, **S. Bas**, A. P. Cunha, R. A. Pawlisch, J. N. Guenther, and P. M. Fricke. Fertility after timed artificial insemination in lactating dairy cows resynchronized using Double–Ovsynch or standard Ovsynch. *J. Anim. Sci.* Vol. 87, E-Suppl. 2/*J. Dairy Sci.* Vol. 92, E-Suppl. 1.
3. J. O. Giordano, P. M. Fricke, **S. Bas**, A. P. Cunha, R. A. Pawlisch, J. N. Guenther, and M. C. Wiltbank. Effect of increasing GnRH and PGF2 $\alpha$  dose during double–Ovsynch on fertility of lactating dairy cows at first postpartum timed artificial insemination. *J. Anim. Sci.* Vol. 87, E-Suppl. 2/*J. Dairy Sci.* Vol. 92, E-Suppl. 1.
4. **S. Bas**, A. Hoet, P. Rajala-Schultz, D. Sanders, G. M. Schuenemann. Effect of using protective AI covers sheaths on fertility of lactating dairy cows. *Reproduction, Fertility and Development*, Vol. 22 No. 1 Pages 163 - 163, Published 8 December 2009.
5. G.M. Schuenemann, M.L. Eastridge, W.P. Weiss, J.D. Workman, **S. Bas**, and P. Rajala-Schultz. Assessing Learning Outcomes: a Comprehensive Dairy Cattle Nutrition Curriculum for Practicing Veterinarians *J. Dairy Sci.* Vol. 93, E-Suppl. 1.
6. T. Brick, **S. Bas**, F. Silveira, J. Daniels, C. Pinto, Rajala-Schulz, D. Sanders; G. Schuenemann. 2010. Efficacy of Intrauterine Dextrose Therapy on Fertility of Lactating Dairy Cows Diagnosed with Clinical Endometritis. American Association of Bovine Practitioners Conference.
7. G.M. Schuenemann, I. Nieto, **S. Bas**, K.N. Galvão, J. Workman. 2011. I. Dairy Calving Management: Dystocia and Timing for Intervention. *J. Dairy Sci.* Vol. 94, E-Suppl. 1.
8. G.M. Schuenemann, I. Nieto, **S. Bas**, K.N. Galvão, J. Workman. 2011. II. Dairy Calving Management: Effect of Perineal Hygiene Scores on Metritis. *J. Dairy Sci.* Vol. 94, E-Suppl. 1.
9. G.M. Schuenemann, **S. Bas**, E. Gordon, J. Workman. 2011. III. Dairy calving management: Assessment of a comprehensive program for dairy personnel. *J. Dairy Sci.* Vol. 94, E-Suppl. 1
10. **S. Bas**, G.M. Schuenemann, A. Hoet, E. Gordon, D. Sanders, K.N. Galvão. 2011.

- Effects of Using Protective Cover Sheaths at the Time of AI on Fertility of Lactating Dairy Cows. *J. Dairy Sci.* Vol. 94, E-Suppl. 1.
11. G.M. Schuenemann, P. Rajala-Schultz, E. Gordon, **S. Bas**, and J.D. Workman. 2011. Assessing a comprehensive udder health and mastitis control program for practicing dairy veterinarians. *J. Dairy Sci.* Vol. 94, E-Suppl. 1.
  12. G.M. Schuenemann, D. Shoemaker, D. Breece, **S. Bas**, J.D. Workman. 2011. Assessing a comprehensive dairy cattle economic program for practicing dairy veterinarians. *J. Dairy Sci.* Vol. 94, E-Suppl. 1.
  13. **S. Bas**, C.G. Pinto, M.L. Day, G.M. Schuenemann. 2011. Evaluation of LH Release after the Intrauterine Administration of GnRH in Lactating Dairy Cattle. *J. Dairy Sci.* Vol. 94, E-Suppl. 1
  14. T.A. Brick, **S. Bas**, J.B. Daniels, C. Pinto, D.M. Rings, and G.M. Schuenemann. 2011. Impact of Intrauterine Dextrose Therapy on Conception of Lactating Dairy Cows with Clinical Endometritis. *J. Dairy Sci.* Vol. 94, E-Suppl. 1.
  15. **S. Bas**, P. Federico, and G.M. Schuenemann. 2012. Interactive Index to Identify and Rank Risk Factors Affecting Reproductive Performance of Lactating Dairy Cows under Field Conditions. *J. Dairy Sci.* Vol. 95, Suppl. 2.
  16. **S. Bas**, R.L. Nebel, and G.M. Schuenemann. 2012. Identifying Within-Herd Risk Factors Affecting Reproductive Performance of Lactating Dairy Cows under Field Conditions. *J. Dairy Sci.* Vol. 95, Suppl. 2.
  17. **S. Bas**, M.L. Day, G.M. Schuenemann. 2012. Effect of Intrauterine Administration of GnRH on LH Secretion in Lactating Dairy Cows. *J. Dairy Sci.* Vol. 95, Suppl. 2.
  18. **S. Bas**, K.N. Galvão, G.M. Schuenemann. 2012. Economics of using sheath protectors at the time of AI in dairy cows. *J. Dairy Sci.* Vol. 95, Suppl. 2.
  19. G. M. Schuenemann, **S. Bas**, K. N. Galvão. Effect of AI technicians on reproductive performance and economics of lactating dairy cows. *J. Dairy Sci.* Vol. 95, Suppl. 2.
  20. M. G. Maquivar, G. M. Schuenemann, **S. Bas**, T. A. Brick. 2012. Effect of intrauterine dextrose therapy on reproductive performance of lactating dairy cows with clinical endometritis. *J. Dairy Sci.* Vol. 95, Suppl. 2.
  21. M. Titler, M.G. Maquivar, **S. Bas**, E. Gordon, P.J. Rajala-Schultz, K. McCullough, and G.M. Schuenemann. Effect of parity on daily activity patterns prior to parturition in Holstein dairy cows. *J. Dairy Sci.* Vol. 96.
  22. M. Titler, M.G. Maquivar, **S. Bas**, E. Gordon, P.J. Rajala-Schultz, K. McCullough, and G.M. Schuenemann. Effect of dystocia on daily activity patterns prior to parturition in Holstein dairy cows. *J. Dairy Sci.* Vol. 96.
  23. M. Titler, M.G. Maquivar, **S. Bas**, E. Gordon, P.J. Rajala-Schultz, K. McCullough, and G.M. Schuenemann. Effect of metritis on daily activity patterns in lactating Holstein dairy cows. *J. Dairy Sci.* Vol. 96
  24. G.M. Schuenemann, M.G. Maquivar, **S. Bas**, and J.D. Workman. Effect of milking personnel performance and turnover on milk losses in dairy herds. *J. Dairy Sci.* Vol. 96
  25. Hunter, A. M. G. Maquivar, S. Bas, T. A. Brick, W. P. Weiss, J. S. Velez, H. Bothe, and G. M. Schuenemann. 2014. Effect of serum calcium status at calving on survival, health, and performance of postpartum dairy cows and calves. *J. Dairy Sci.* 97:168 (E-Suppl. 1).
  26. **S. Bas**, T. A. Brick, G. Starkey, G. Messerschmidt, A. A. Barragan, and G. M. Schuenemann. 2014. Comparison of two gonadorelin formulations and two luteolytic agents on pregnancy rates in beef cattle synchronized with a 5-d CO-Synch + CIDR

- program. *J. Dairy Sci.* 97:694 (E-Suppl. 1).
27. Hunter, A. M. G. Maquivar, **S. Bas**, T. A. Brick, W. P. Weiss, J. S. Velez, H. Bothe, and G. M. Schuenemann. 2014. Effect of serum calcium status at calving on survival, health, and performance of postpartum dairy cows and calves. *AABP Research Summaries*. Albuquerque, NM; July 17-20, 2014.
  28. Schuenemann, G.M., A.A. Barragan, **S. Bas**, and J.D. Workman. 2014. Effect of Milking Routine Performance and Turnover of Personnel on Milk Losses in Dairy Herds. *AABP Research Summaries*. Albuquerque, NM; July 17-20, 2014.
  29. **S. Bas**, T. A. Brick, G. Starkey, G. Messerschmidt, A. A. Barragan, and G. M. Schuenemann. 2014. Comparison of two gonadorelin formulations and two luteolytic agents on pregnancy rates in beef cattle synchronized with a 5-d CO-Synch + CIDR program. *AABP Research Summaries*. Albuquerque, NM; July 17-20, 2014.
  30. R. Digianantonio, G. Schuenemann, **S. Bas**, L. Vargas-Munoz, and G. Habing. The Association Between Metabolic Stress Levels and Shedding of *Salmonella enterica* in Transition Dairy Cattle. 2014. The Ohio State University College of Veterinary Medicine Advances in Veterinary Medicine Research. Columbus, OH; April 17, 2014.
  31. **S. Bas**, T. A. Brick, G. Starkey, G. Messerschmidt, A. A. Barragan, G. M. Schuenemann, and M. L. Day. 2014. Comparison of two gonadorelin formulations and two luteolytic agents on pregnancy rates in beef cattle synchronized with a 5-d CO-Synch + CIDR program. DCRC Poster Session. Salt Lake City, UT; November 12-13, 2014.
  32. **S. Bas**, and G.M. Schuenemann. Assessment of an application for mobile devices developed to evaluate the AI procedure. *J. Dairy Sci.* Vol. 98:94 Suppl. 2.
  33. A. A. Barragan, J. D. Workman, **S. Bas**, K. L. Proudfoot, G. M. Schuenemann. Assessment of an application to collect calving-related events in dairy herds. *J. Dairy Sci.* Vol. 98:328, Suppl. 2.
  34. **Bas S**, A. A. Barragan, J. M. Piñeiro, G. M. Schuenemann, P. J. Rajala-Schultz, T. A. Brick. Assessment of daily activity patterns in lactating dairy cows diagnosed with metritis. *J. Dairy Sci.* Vol. 98:509, Suppl. 2.
  35. G. M. Schuenemann, J. M. Piñeiro, A. A. Barragan, **S. Bas**, J. D. Workman. Assessment of calving personnel performance and stillbirth in dairy herds. *J. Dairy Sci.* Vol. 98:564, Suppl. 2.
  36. G. M. Schuenemann, M. G. Maquivar, A. Hunter, A. A. Barragan, J. M. Piñeiro, J. S. Velez, H. Bothe, **S. Bas**. Managing transition cows and reproduction in certified organic dairy herds. *J. Dairy Sci.* Vol. 98:833, Suppl. 2.

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## NATIONAL AND INTERNATIONAL PRESENTATIONS

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1. **S. Bas**, A. Hoet, P. Rajala-Schultz, D. Sanders and G. M. Schuenemann. 2011. Effect of Using Protective AI Cover Sheaths on Fertility of Lactating Dairy Cows. Presented at 2010 Annual College Research Day, to Researchers, veterinarians, and students. College of Veterinary Medicine. Columbus, Ohio, USA. (April 8)
2. G.M. Schuenemann and **S. Bas**. 2011. Management factors affecting reproductive efficiency in AI and natural breeding programs. Columbus, Ohio: 2011 Midwestern Veterinary Conference.
3. G. M. Schuenemann, **S. Bas**, A. Hoet, E. Gordon, D. Sanders, K. N. Galvão, P. Rajala-

- Schultz. 2011. The use of protective AI cover sheaths improved fertility in lactating dairy cows. In: Clinical Theriogenology. Vol. 3, USA. (September): 246-248. (Published)
4. G.M. Schuenemann, T.A. Brick, and **S. Bas**. 2011. Effective treatment of uterine disease in certified organic dairy herds. In: Dairy Symposium Proceedings. Milwaukee, Wisconsin, USA. (August 13).
  5. G. M. Schuenemann, I. Nieto, **S. Bas**, K. N. Galvão, and J. Workman. 2011. Assessment of calving progress and reference times for obstetric intervention during dystocia in Holstein dairy cows. In: Research Summary - Dairy. 44th Annual Conference of the American Association of Bovine Practitioners. September 22-24 ed: American Association of Bovine Practitioners.
  6. G.M. Schuenemann and **S. Bas**. 2011. Management factors affecting reproductive efficiency in AI and natural breeding programs. In: Food Animal. Columbus, Ohio, USA: 2011 Midwestern Veterinary Conference. <http://www.mvcinfo.org/>
  7. T. Brick, **S. Bas**, F. Silveira, J. Daniels, C. Pinto, Rajala-Schulz, D. Sanders; G. Schuenemann. 2010. Efficacy of intrauterine dextrose therapy on fertility of lactating dairy cows diagnosed with clinical endometritis. In: 43rd Annual Conference. American Association of Bovine Practitioners. Vol. 43. Albuquerque, New Mexico. (August):253.
  8. G.M. Schuenemann, **Bas, S.**, Workman, J.D., and Rajala-Schultz, P. 2009. Beyond perception: Assessing reproductive modules within a continuing education program for dairy veterinarians. In: AABP meeting September 10, 2009, Omaha, Nebraska.
  9. G.M. Schuenemann and **S. Bas**, Seminar Presenter. 2011. Uterine Diseases in Certified Organic Herds: Management and Treatment Options. Presented at 2011 OFFER Field Day, to Organic producers. West Badger Farm. Wooster, Ohio, USA. (September 1)
  10. G.M. Schuenemann and **S. Bas**. 2011. New Outlook on Using Protective Cover Sheaths at the Time of AI on Fertility of Lactating Dairy Cows. Presented at 2011 SFT/ACT Annual Conference & Symposium, to Practicing veterinarians, veterinary students, researchers, and industry. Milwaukee Convention Center. Milwaukee, Wisconsin, USA. (August 12)
  11. G.M. Schuenemann and **S. Bas**. 2011. Uterine Diseases in Certified Organic Herds: Management and Treatment Options. Presented at 2011 SFT/ACT Annual Conference & Symposium, to Practicing veterinarians, graduate students, dairy producers, and industry. Milwaukee Conference Center. Milwaukee, Wisconsin, USA. (August 9 - 13)
  12. **S. Bas**, C.G. Pinto, M.L. Day and G.M. Schuenemann. 2011. Evaluation of LH Release after the Intrauterine Administration of GnRH in Lactating Dairy Cattle. Presented at College of Veterinary Medicine Research Week, to Researchers, veterinarians, and students. College of Veterinary Medicine. Columbus, Ohio, USA. (April 11 - 14)
  13. G.M. Schuenemann and **S. Bas**. 2011. New Outlook on Using Protective Cover Sheaths at the Time of AI on Fertility of Lactating Dairy Cows. Presented at 2011 Select Sires National Technician Conference, to Artificial insemination technicians. Kellgren Center, Select Sires. Plain City, Ohio, USA. (September 14).
  14. **S. Bas**, M.L. Day, C. Pinto, and G.M. Schuenemann. Effect of Intrauterine Administration of Gonadotropin Releasing Hormone on Serum LH Concentrations in Lactating Dairy Cows. 2012 Ohio Dairy Veterinarians Meeting. Columbus, Ohio.
  15. **S. Bas**, G.M. Schuenemann, A. Hoet, E. Gordon, D. Sanders, and K. N. Galvão. 2012. Effects of Using Protective Cover Sheaths at the Time of AI on Fertility of Lactating

- Dairy Cows. Edward F. Hayes Graduate Research Forum. Columbus, OH, USA. (February 24).
16. G. M. Schuenemann, M.G Maquivar, and **S. Bas**. 2012. Comportamiento de la Madre al Parto y Manejo de la Distocia en Hatos Lecheros. Simposio Expo Leche San Marcos, 24-26 de Abril de 2012, Aguascalientes, México.
  17. **S. Bas**, G.M. Schuenemann, A. Hoet, E. Gordon, D. Sanders, K.N. Galvão, and P. Rajala-Schultz. 2012. Efecto del Uso de Vainas Protectoras al Momento de la IA en la Fertilidad de Vacas Lecheras. International Certificate Program for Dairy and Beef veterinary Practitioners. Columbus, Ohio, USA. (June 18-23).
  18. **S. Bas**, M.G. Maquivar, M.L. Day, M.C. Daglio, S. Harguindeguy, M. Titler, and G.M. Schuenemann. Effect of Intrauterine Administration of GnRH on LH Secretion in Lactating Dairy Cows. 2013 Ohio Dairy Veterinarians. January, 2013. Columbus, Ohio, United States.
  19. M. Titler, M.G. Maquivar, **S. Bas**, K McCullough, P.J. Rajala-Schultz, E. Gordon, and G.M. Schuenemann. Effect of Dystocia and Metritis on Daily Activity Patterns and Productivity of Lactating Holstein Cows. 2013 Ohio Dairy Veterinarians. January, 2013. Columbus, Ohio, United States.
  20. M.G. Maquivar, A. Barragan, T. Brick, **S. Bas**, G.M. Schuenemann. Effect of Intrauterine Dextrose Therapy on Reproductive Performance of Lactating Dairy Cows with Clinical Endometritis under Conventional and Organic Management. 2013 Ohio Dairy Veterinarians. January, 2013. Columbus, Ohio, United States.
  21. G.M. Schuenemann, M.G. Maquivar, **S. Bas**, and J.D. Workman. Monitoreo del manejo y atención de partos. Día Internacional del Ganado Lechero 2013. September 11-13. Delicias, México.
  22. G.M. Schuenemann, **S. Bas**, and J.D. Workman. “Moneyball” A new approach to practice; building the perfect team and prioritizing problems in dairy herds. American Association of Bovine Practitioners. September 18-21, Milwaukee, WI.
  23. **S. Bas**, G. Starkey, G. Messerschmidt, T. Brick, A.A. Barragan, G.M. Schuenemann, M.L. Day. Comparison of Two Gonadorelin Formulations and Two Luteolytic Agents on Pregnancy Rates in Beef Cattle Synchronized with a 5-d CO-Synch + CIDR Program. Presented at 2013 Roy A. Wallace Symposium. October 15-16. Staunton, VA, USA.
  24. G.M. Schuenemann, **S. Bas**, and J.D. Workman. Calving management: The first step of a successful reproductive program. Dairy Cattle Reproduction Council 2013. November 7-8. Indianapolis, IN.
  25. Schuenemann, G.M., **S. Bas**, A.A. Barragan, and J.D. Workman. 2014. Management and Training of Dairy Personnel with Emphasis on Team Work and Performance. 50th Florida Dairy Production Conference. April 9, 2014, Gainesville, FL.
  26. Schuenemann, G.M., **S. Bas**, and J.D. Workman. 2014. Dairy Herd Audit Tools for Calving-Related Losses. Midwest Veterinary Conference. February 23, 2014, Columbus, OH.
  27. Bas, S. Implementación de un Programa Integral para la Salud de la Ubre. International Certificate Program for Dairy Veterinary Practitioners. Columbus, Ohio, USA. (August 3-8).
  28. Bas, S. Implementation of an Udder Health Management Program. International Certificate Program for Dairy Veterinary Practitioners. Columbus, Ohio, USA. (August 24-28).



29. **S. Bas**, and G.M. Schuenemann. Assessment of an application for mobile devices developed to evaluate the AI procedure. Dairy Cattle Reproduction Council 2015. November 12-13. Buffalo, NY.

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## **INVENTIONS & PATENTS**

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1. Schuenemann, GM; Federico, P and **Bas, S**. Interactive Key Parameters Index: a decision making aid for livestock and wildlife management systems. Department of Veterinary Preventive Medicine. College of Veterinary Preventive Medicine. Columbus, Ohio. Application number: 2011-141

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## **TEACHING EXPERIENCE**

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### **Instructor, The Ohio State University**

1. Advance Preventive Medicine (2 cr. Professional). Clinical Instructor. 2013-2015
2. Preventive Medicine (2 cr., Professional). Clinical Instructor. 2013-2015

### **Guest Lecturer, The Ohio State University**

1. Bovine Theriogenology (2 cr. Professional, Graduate, Undergraduate). 2012 - 2014
  - Physiology of the bovine estrous cycle.
  - Manipulation of the estrous cycle in dairy cattle.
2. Dairy Herd Health (2 cr. Professional, Graduate, Undergraduate). 2010 - 2014
  - Dairy calf management.
  - Dairy heifer management.
  - Ultrasonography in dairy cattle.
3. Epidemiology of Zoonotic Diseases (3 cr. Professional, Graduate). 2013-2014
  - Anthrax
4. Introduction to Animal Behavior (2 cr. Professional). 2012- 2014
  - Instructor in low stress cattle handling labs.
5. Literature of production medicine (1 cr. Professional). 2013-2014
  - Lead discussion on research manuscript.
6. Reproductive System (3 cr. Professional)
  - Physiology of Lactation and Mastitis

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## **STUDENTS**

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2013 - Present	Barragan, Adrian. Thesis Committee Member. Masters Science Student. Title of Thesis: Effect of Calving Management Practices on Stillbirth in Holstein Dairy Cows with Emphasis in Confinement Systems.
2013 - Present	Hunter, Alissa. Thesis Committee Member. Masters Science Student. Title of Thesis: Effect of calcium balance at calving on cow and calf health survival and performance
2014 - Present	Sanders, Meghan. Early commitment program. The Ohio State University, College of Veterinary Medicine.

2014 - Present	Colton Harstine. Early commitment program. The Ohio State University, College of Veterinary Medicine.
2015 - Present	Barragan, Adrian. Thesis Advisor. PhD student. Title of Theses: TBA
2015 - Present	Bauman, Logan. Early commitment program. The Ohio State University, College of Veterinary Medicine.
2015 - Present	Webb, Brittany. Early commitment program. The Ohio State University, College of Veterinary Medicine.

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## **STATEMENT OF RESEARCH, TEACHING AND OUTREACH**

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### **Research**

Animal agriculture is under increased scrutiny and dairy producers need to focus on the welfare and humane treatment of cattle. In the last decades there has been an advancement on the veterinary attitudes to animal pain; however, pain management is still relatively low. Thus, one of my research interests focuses on the assessment of methods to evaluate pain and the development of pain management strategies aimed to improve the welfare of dairy cattle. In addition, improving reproductive efficiency is paramount to maximize the sustainability of dairy operations. Suboptimal reproductive performance leads to increased culling rates, decreased milk yield, and decrease genetic progress; thus, negatively affecting economic returns. Therefore, the implementation of effective management strategies that enable high levels of reproductive performance is critical for the sustainability of dairy operations. Therefore, my other research goal focuses on the development of strategies aimed to improve fertility in dairy cattle.

My career research goals include:

- To establish a strong, dynamic, and aggressive research program that addresses animal welfare, health and fertility issues in dairy cattle.
- Development of risk assessment tools to assist with decision-making.
- To establish a strong, dynamic, and aggressive research program nationally and internationally recognized supported by extramural funding.
- Interact with dairy stakeholders and participants to develop new applicable research projects that address the current needs of the dairy industry to improve their economic profitability.

### **Teaching and Outreach**

My teaching goal is to emphasize critical thinking and develop problem-solving skills to help students become leaders within the dairy industry. I seek to create an atmosphere that encourages student participation, which facilitates the interaction between the students and the instructor. My approach to teaching is through constant exchange of opinions and ideas with students. I let the students elaborate on different approaches to solve problems providing them an opportunity to apply what they learn in the classroom to real-life situations. This approach facilitates active discussion while stimulating critical thinking and awareness of multiple perspectives and approaches to problem solving. Furthermore, I am a firm believer that the interaction with dairy stakeholders (producers, staff, extension agents,

industry participants) is critical to identify the current needs of the dairy industry and generate new knowledge through research. Furthermore, the translation of research-based knowledge and skills into practical applications for immediate use of dairy industry is essential.

My career teaching and outreach goals include:

- To teach and assist students to think clearly, logically, and analytically.
- To enhance the flow of generated science based information through the interaction with extension agents.
- Establish collaborative opportunities with leading dairy industries.
- To actively participate in county, state, national, and international meetings associated with industry and science.