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SCHOLARLY INTERESTS

My research interests include ruminant physiology, reproductive endocrinology, stress physiology and highland pasture development. My current research focus is on elucidation of physiological mechanisms linking reproduction to nutrition and environmental stress in yak. I am also interested in the finding microRNAs involved in cellular communication related to physiological events like fertilization and immunity transfer in yak.

PROFESSIONAL EXPERIENCE

2003-2004: Senior Research Fellow, National Dairy Research Institute, Karnal, India
2004-2005: Research Associate, National Bureau of Animal Genetic Resources, Karnal, India
2005-2009: Post-Doctoral Research Associate, Technical University Munich, Germany
2009-Present: Senior Scientist, National Research Centre on Yak, Dirang, Arunachal Pradesh, India

HONOURS AND RECOGNITIONS

ICAR's Jawahar Lal Nehru award for post-graduate research in Agricultural Sciences for year 2004
DBT's Overseas Associateship for North Eastern Region (NER) for year 2011-12

RESEARCH PROJECTS/AWARDS

1. 2009-2013: Interaction between metabolic and reproductive functions in the resumption of postpartum fertility in yak (*Poephagus grunniens* L.) (PI, funded by ICAR-institutional research project)
2. 2009-2012: Network project on amelioration of temperate/alpine pastures for livelihood support to pastoral communities. (PI, funded by ICAR-Network project)
3. 2009-2013: Conservation and multiplication of germplasm of yak (*Poephagus grunniens*) and its hybrid using in vitro embryo production techniques. (CO-PI, funded by DBT)
4. 2010-2013: Effect of plane of nutrition on growth performance nutrient utilization and reproduction in yak. (CO-PI, funded by ICAR-institutional research project)
5. 2005-2009: Long-term feeding of genetically modified maize (MON810)-fate of *cry1Ab* DNA and novel protein during the metabolism of the dairy cow. (Post-doctoral Associate, funded by Bavarian State Ministry of Agriculture, Germany)

RESEARCH ARTICLES

1. Bora L, **Paul V**, Bam J, Saikia A & Hazarika D. Handicraft skills of Yak Pastoralists in Arunachal Pradesh. **Indian Journal of Traditional Knowledge**. Vol. 12(4), October 2013, pp. 718-724.
2. Bandyopadhyay S, Lodh C, Rahaman H, Bhattacharya D, Bera AK, Ahmed FA, Mahanti A, Samanta I, Mondal DK, Bandyopadhyay S, Sarkar S, Dutta TK, Maity S, **Paul V**, Ghosh, MK, Sarkar M, Baruah KK. Characterization of shiga toxin producing (STEC) and enteropathogenic Escherichia coli (EPEC) in raw yak (*Poephagus grunniens*) milk and milk products. **Res Vet Sci**. 2012, 93: 604-10
3. Bam J, Deori S, **Paul V**, Bhattacharya D, Bera AK, Bora L, Baruah KK. Seasonal prevalence of parasitic infection of yaks in Arunachal Pradesh, India. **Asian Pacific Journal of Tropical Disease**. 2012, 2: 264–267
4. Baruah K K, **Paul V**, Ahmed FUA, Chakravarty P, Deori S, Sarma H and Saikia A. Effect of strategic feed supplementation on growth performance and nutrient utilization in yak calves during winter. **Indian J. Anim. Sci**. 2012, 82(2):220-222.
5. Baruah KK, Sarma H, **Paul V** and Ahmed FA. Nutritive value of maize fodder for Yak. **Indian Vet. J**. 2012, 89 (3): 86.
6. Baruah KK, Chakravarty P, **Paul V**, Sarma H, Ahmed F A and Das KC. Effect of feeding complete feed block based on unconventional feeds on growth performance and nutrient utilization of yak calves. **Indian Vet. J**. 2011, 88(10):134
7. **Paul, V.**; Maiti, S.; Singh, J. P.; Ghosh, M. K.; Baruah, K. K. and Chaurasia, R. S. Geomatics based study of yak rearing tracks of north-eastern Himalayan grasslands. *Range Management & Agroforestry Symposium Issue (A)*, 107-109, 2010 ISSN 0971-2070
8. Patel DC, Albrecht C, Pavitt D, **Paul V**, Pourreyon C, Newman SP, Godslan IF, Valabhji J, Johnston DG. Type 2 diabetes is associated with reduced ATP-binding cassette transporter A1 gene expression, protein and function. **PLoS One**. 2011;6(7):e22142. Epub 2011 Jul 27.
9. Gruber H, **Paul V**, Guertler P, Spiekers H, Tichopad A, Meyer HH, Muller M. Fate of Cry1Ab protein in agricultural systems under slurry management of cows fed genetically modified maize (*Zea mays* L.) MON810: a quantitative assessment. **J Agric Food Chem**. 2011 Jul 13;59(13):7135-44. Epub 2011 Jun 8.
10. Gruber H, **Paul V**, Meyer HH, Müller M. Determination of insecticidal Cry1Ab protein in soil collected in the final growing seasons of a nine-year field trial of Bt-maize MON810. **Transgenic Res**. 2011 Apr 16.
11. Herzog K, Voss C, Kastelic JP, Beindorff N, **Paul V**, Niemann H, Bollwein H. Luteal blood flow increases during the first three weeks of pregnancy in lactating dairy cows. **Theriogenology**. 2011 Feb;75(3):549-54. Epub 2010 Oct 20.
12. Guertler, P.; **Paul V.**; Steinke K.; Wiedemann S.; Preißinger W.; Spiekers H.; Schwarz F. J.; Meyer H.H.D.: Long-term feeding of genetically modified corn (MON810) - Fate of cry1Ab DNA and recombinant protein during the metabolism of the dairy cow. **Livestock Science** 131 (2010) 250–259
13. Steinke K, Guertler P, **Paul V**, Wiedemann S, Eitle T, Albrecht C, Meyer HH, Spiekers H, Schwarz FJ. Effects of long-term feeding of genetically modified corn (event MON810) on the performance of lactating dairy cows. **J Anim Physiol Anim Nutr (Berl)**. 2010 Oct;94(5):e185-93. doi: 10.1111/j.1439-0396.2010.01003.x. Epub 2010 Jun 22.
14. Herzog K, Brockhan-Lüdemann M, Kaske M, Beindorff N, **Paul V**, Niemann H, Bollwein H. Luteal blood flow is a more appropriate indicator for luteal function during the bovine estrous cycle than luteal size. **Theriogenology**. 2010 Mar 15;73(5):691-7. Epub 2010 Jan 13.
15. **Paul V**, Guertler P, Wiedemann S, Meyer HH. Degradation of Cry1Ab protein from genetically modified maize (MON810) in relation to total dietary feed proteins in dairy cow digestion. **Transgenic Res**. 2010 Aug;19(4):683-9. Epub 2009 Nov 4.

16. Beindorff N, Honnens A, Penno Y, **Paul V**, Bollwein H. Effects of human chorionic gonadotropin on luteal blood flow and progesterone secretion in cows and in vitro-microdialyzed corpora lutea. **Theriogenology**. 2009 Sep 1;72(4):528-34. Epub 2009 Jun 9.
17. Prakash BS, **Paul V**, Kliem H, Kulozik U, Meyer HH. Determination of oxytocin in milk of cows administered oxytocin. **Anal Chim Acta**. 2009 Mar 16;636(1):111-5. Epub 2009 Feb 3.
18. Guertler P, **Paul V**, Albrecht C, Meyer HH. Sensitive and highly specific quantitative real-time PCR and ELISA for recording a potential transfer of novel DNA and Cry1Ab protein from feed into bovine milk. **Anal Bioanal Chem**. 2009 Mar;393(6-7):1629-38. Epub 2009 Feb 19.
19. Honnens A, Niemann H, Herzog K, **Paul V**, Meyer HH, Bollwein H. Relationships between ovarian blood flow and ovarian response to eCG-treatment of dairy cows. **Anim Reprod Sci**. 2009 Jul;113(1-4):1-10. Epub 2008 Jun 5.
20. Honnens A, Niemann H, **Paul V**, Meyer HH, Bollwein H. Doppler sonography of the uterine arteries during a superovulatory regime in cattle. Uterine blood flow in superovulated cattle. **Theriogenology**. 2008 Sep 15;70(5):859-67. Epub 2008 Jul 7.
21. **Paul V**, Meyer HH, Leidl K, Soumian S, Albrecht C. A novel enzyme immunoassay specific for ABCA1 protein quantification in human tissues and cells. **J Lipid Res**. 2008 Oct;49(10):2259-67. Epub 2008 Jun 9.
22. **Paul V**, Steinke K, Meyer HH. Development and validation of a sensitive enzyme immunoassay for surveillance of Cry1Ab toxin in bovine blood plasma of cows fed Bt-maize (MON810). **Anal Chim Acta**. 2008 Jan 21;607(1):106-13. Epub 2007 Nov 19.
23. **Paul V**, Prakash BS. Efficacy of the Ovsynch protocol for synchronization of ovulation and fixed-time artificial insemination in Murrah buffaloes (*Bubalus bubalis*). **Theriogenology**. 2005 Sep 15;64(5):1049-60. Epub 2005 Mar 2.
24. Prakash BS, **Paul V**, Anandlaxmi N. Development and validation of a simple, sensitive, second antibody format enzyme immunoassay for LH determination in plasma. **J Immunol Methods**. 2002 Dec 15;270(2):281-90.

TECHNICAL BULLETINS

1. Yak Pastoralists of Arunachal Pradesh
2. Indigenous Bamboo Crafting Knowledge of Brokpas of Arunachal Pradesh

MANUALS/COMPENDIUM/NEWS LETTER/LEAFLETS

1. Training manual on “Scientific Feeding and Management Practices for High Altitude Animals” compiled and edited by A. Santra, A. Saikia, J. Bam, V. Paul, and K.K. Baruah
2. Training manual on “Newer feed technologies for feeding of yak and yak cattle hybrid in scarce season” compiled and edited by Mr. Sanjit Maiti, Vijay Paul and Dr. Leema Bora
3. Training manual on “Scientific management practices for clean milk production of high altitude milch animal” compiled and edited by Mr. Sanjit Maiti, Dr. Joken Bam, Dr. Sourabh Deori, Vijay Paul and Dr. F.A. Ahmed
4. A leaflet on “Technology ready for commercialization” Vijay Paul, Sanjit Maiti and Kandeepan G.
5. A leaflet on “A glimpse of National Research Centre on Yak” Sanjit Maiti, Vijay Paul and P. Chakravarty

CONFERENCE ABSTRACTS

1. **Paul, V.**; Maiti, S.; Singh, J. P.; Ghosh, M. K.; Baruah, K. K. and Chaurasia, R. S. “**Geomatics based study of yak rearing tracks of north-eastern Himalayan grasslands**” presented in National Symposium on Optimizing Forage Production from Arable and Non-arable Lands for

Increasing Livestock Production Organized by Range Management Society of India and Indian Grassland & Fodder Research Institute, Jhansi held on Nov 12-14, 2010 at IGFRI, Jhansi. Published in *Range Management & Agroforestry Symposium Issue (A)*, 107-109, 2010 ISSN 0971-2070

2. **Paul, V.**; Maiti, S. and Baruah, K. K. **“Yak Production for highland pastoral nomads of India”** Presented in Grassroot level International workshop on “Health and Development among Highlanders in Arunachal Pradesh, India” organised by District Medical Office, West Kameng and West Kameng Eco-tourism Development Society at Dirang on Feb 9-10, 2011.
3. Gürtler, P.; Paul, V.; Steinke, K.; Wiedemann, S.; Preißinger, W.; Albrecht, C.; Spiekers, H.; Schwarz, F.J.; Meyer, H.H.D.: Sicherheit von GMO Mais MON810 nach langfristigem Einsatz bei Milchkühen. – In: Optimierung des Futterwertes von Mais und Maisprodukten (F.J. Schwarz, U. Meyer, Hrsg.) Veröffentlichungsreihe "Landbauforschung", Sonderheft 331 (2009) 63-74, ISBN 978-3-86576-057-9
4. Gürtler, P.; Paul, V.; Steinke, K.; Preißinger, W.; Wiedemann, S.; Albrecht, C.; Spiekers, H.; Schwarz, F.J.; Meyer, H.H.D.: Investigations on the potential transfer of recombinant DNA and Cry1Ab protein from feed into milk, blood, feces and urine of cows fed genetically modified maize. *Proceedings of the Society of Nutrition Physiology* (2009) S. 111, Abstr. No. 18
5. Guertler, P.; Paul, V.; Steinke, K.; Wiedemann, S.; Preißinger, W.; Albrecht, C.; Spiekers, H.; Schwarz, F.J.; Meyer, H.H.D.: 25-month feeding study with genetically modified maize (MON810) – Metabolism of recombinant DNA and protein in the dairy cow. Abstractband der „Milchkonferenz 2009“ der Gesellschaft für Milchwissenschaft e.V., Wien, Österreich, 17.-18.09.2009, (2009) S. 42, Abstr. No. H11
6. Steinke, K.; Paul, V.; Gürtler, P.; Preißinger, W.; Wiedemann, S.; Albrecht, C.; Spiekers, H.; Meyer, H.H.D.; Schwarz, F.J.: Effects of long-term feeding of genetically modified maize (Bt-maize; MON810) on dairy cows. Book of Abstracts of the 60th Annual Meeting of the European Association for Animal Production (EAAP), Barcelona, Spanien, 24.-27.08.2009 (2009) S. 349
7. Steinke, K.; Paul, V.; Gürtler, P.; Preißinger, W.; Wiedemann, S.; Albrecht, C.; Spiekers, H.; Meyer, H.H.D.; Schwarz, F.J.: Effects of long-term feeding of genetically modified maize (Bt-maize; MON810) to dairy cows on performance and metabolic parameters. *Proceedings of the Society of Nutrition Physiology* (2009) S. 110, Abstr. No. 18
8. Kandeepan. G.; Sangma. S.; Vijay Paul and Krishnan. G.(2009): Utilization of whey derived from yak (*Bos grunniens* or *Poephagus grunniens* L.) milk products. National seminar on “wealth from livestock and agriculture waste” at Namakkal.

DOCUMENTATION/DOCUMENTARY

1. A bi-lingual (Hindi and English) documentary on National Research Centre on Yak entitled **“National Research Centre on Yak: At a Glance”**