

Personal Profile



Name	Dr. S. P. Singh
Designation	Scientist
Division	Animal Physiology and Reproduction
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Qualification	PhD (Animal Physiology)
Current Research Area	Endocrine Physiology of goats and Reproductive Biotechnology (stem cells)
Major research accomplishments	<ul style="list-style-type: none">• Estimation of adiponectin concentration in bovine circulation and milk along with the proportion of steady-state plasma adiponectin secreted via milk.• Different components of an ELISA were optimized for early pregnancy diagnosis in goats.• Protocol for isolation and culture of caprine spermatogonial stem cells was optimized
Awards	<ul style="list-style-type: none">• Junior Research Fellowship• ICAR International Fellowship• Best poster and oral presentation in different national and International conferences/seminars
Training	<ol style="list-style-type: none">1) 21 days summer school on 'Improving reproduction rate through assisted reproductive and stem cell technologies for enhancing reproduction for small ruminants' at ICAR-CIRG.2) 5 days training program on 'Spermatogonial Stem Cell biology' at Animal Biotechnology Centre of ICAR-NDRI, Karnal.
Technology and Methodology	<ul style="list-style-type: none">• Methodology for saliva sample collection by non-surgical method for hormone estimation in goats was developed.• Validation of different commercial ELISA kits was done for their applicability to estimate hormone concentrations in goat samples.• Methodology for isolation and culture of spermatogonial stem cells is optimized.

Publications

List of publications (best 20 only)

1. **S. P. Singh**, R. Natesan, N. Sharma, M. K. Singh, A. Rahal. 2018. Lipopolysaccharide exposure modifies salivary and circulating level of cortisol in goats. **Small Ruminant Research**, 162: 30-33.
2. **S. P. Singh**, G. Dass, R. Natesan, Y. Kushwah, N. Sharma, A. Kumar. 2018. Endocrine and haemato-biochemical profile of lambs raised in semiarid region with different growth potentials during post-weaning period. **Turkish Journal of Veterinary and Animal Sciences (in press)**; 10.3906/vet-1709-38).
3. **S. P. Singh**, N. Ramachandran, N. Sharma and A. Kumar. 2018. Lipopolysaccharide-induced changes in physiological and haematological variables of Jakhrana goats. **Indian Journal of Animal Sciences**, 88 (1): 79–83.
4. A. K. Goel, S. D. Kharche, **S. P. Singh**, R. Ranjan, S. K. Jindal, S. Kumar and N. Ramachandran. 2018. Testosterone and progesterone levels during different reproductive stages in Jakhrana goats. **The Indian Journal of Small Ruminants**, 24(1): 80-83.
5. **S. P. Singh**, N. Ramachandran, M. K. Tripathi and S. Bhusan. 2017. Physiological, biochemical and endocrine responses of goat kids maintained on two different floor types in hot-dry weather conditions. **Indian Journal of Animal Science**, 87 (2): 223–228.
6. N. Ramachandran, **S. P. Singh**, M. K. Tripathi, S. Paul, S. Bhusan and S. K. Jindal. 2017. Intake, growth performance and worm load in goat kids maintained on conventional soiled or raised wooden slatted floor. **Indian Journal of Animal Science**, 87 (3): 356–360.
7. N. Ramachandran and **S.P. Singh**. 2017. Effect of floor type on body surface temperature and their relationship with physiological variables in kids during hot dry period. **The Indian Journal of Small Ruminants**, 23(1): 30-34.
8. K. Goel, S. D. Kharche, S. K. Jindal, S. Kumar, R. Ranjan, **S. P. Singh** and S. Bhushan. 2016. Progesterone profile and ultrasonographic scanning of uterus during post-partum period in Jakhrana goats. **Indian Journal of Animal Science**, 86 (9): 1003-1005.
9. Heinz, J. F. L., **S. P. Singh**, U. Janowitz, M. Hoelker, D. Tesfaye, K. Schellander, and H. Sauerwein. 2015. Characterization of adiponectin concentrations and molecular weight forms in bovine body fluids related to reproduction. **Theriogenology**, 83: 326–333.
10. L. Locher, S. Haussler, L. Laubenthal, **S. P. Singh**, J. Winkler, A. Kinoshita, A. Kenez, J. Rehage, K. Huber, H. Sauerwein, S. Danicke. 2015. Effect of increasing body condition on key regulators of fat metabolism in subcutaneous adipose tissue depot and circulation of nonlactating dairy cows. **Journal of Dairy Science**, 98(2): 1057-1068.
11. **S. P. Singh**, S. Häussler, J. F. L. Heinz, B. Saremi, B. Mielenz, J. Rehage, S. Dänicke, M. Mielenz, and H. Sauerwein. 2014. Supplementation with conjugated linoleic acids extends the adiponectin deficit during early lactation in dairy cows. **General and Comparative Endocrinology**, 198: 13-21.
12. **S. P. Singh**, S. Häussler, J. F. L. Heinz, S. H. Akter, B. Saremi, U. Müller, J. Rehage, S. Dänicke, M. Mielenz and H. Sauerwein. 2014. Lactation driven dynamics of adiponectin supply from different fat depots to circulation in cows. **Domestic Animal Endocrinology**, 47: 35-46.
13. **Singh, S. P.**, S. Häussler, J. J. Gross, R. M. Bruckmaier, and H. Sauerwein. 2014. Circulating and milk adiponectin change differently during energy deficiency at different stages of lactation in dairy cows. **Journal of Dairy Science**, 97(3): 1535-5342.
14. C. Kopp, **S. P. Singh**, P. Regenhard, H. Sauerwein and M. Mielenz. 2014. *Trans*-cinnamic acid increases adiponectin and the phosphorylation of AMP-activated protein kinase via G-

protein coupled receptor 109A in 3T3-L1 adipocyte. **International Journal of Molecular Sciences**, 15: 2906-2915.

15. C. Kopp, A. Hosseini, **S. P. Singh**, P. Regenhard, H. Khalilvandi-Behroozyar, H. Sauerwein and M. Mielenz. 2014. Nicotinic acid increases adiponectin secretion from differentiated bovine preadipocytes through g-protein coupled receptor signaling. **International Journal of Molecular Sciences**, 15: 21401-21418.
16. M. Mielenz, B. Mielenz, **S. P. Singh**, C.Kopp, J. Heinz, S. Häussler, and H. Sauerwein. 2013. Development, validation, and pilot application of a semiquantitative Western blot analysis and an ELISA for bovine adiponectin. **Domestic Animal Endocrinology**, 44: 121–130.
17. C. Weber, C. Hametner, A. Tuchscherer, B. Losand, E. Kanitz, W. Otten, **S. P. Singh**, R. M. Bruckmaier, F. Becker, W. Kanitz, and H. M. Hammon. 2013. Variation in fat mobilization during early lactation in high yielding dairy cows affect feed intake, body condition as well as glucose and lipid metabolism. **Journal of Dairy Science**, 96: 165–180.
18. V. K. Bharti, **S. P. Singh**, P. Kumar, R. P. Misra, and N.Bhavna. 2012. Effect of solar eclipse on certain blood biochemicals in goats under intensive and extensive housing systems. **Indian Journal of Animal Sciences**, 82 (8): 844–847.
19. **S. P. Singh**, O. K. Hooda, S. S. Kundu, and S. Singh. 2012. Biochemical changes in heat exposed buffalo heifers supplemented with yeast. **Tropical Animal Health and Production**, 44: 1383–1387.
20. **S. P. Singh**, O. K. Hooda, and P. Kumar. 2011. Effect of yeast supplementation on feed intake and thermal stress mitigation in buffaloes. **Indian Journal of Animal Sciences**, 81 (9): 961–964.