Curriculum Vitae

1. Personal data

Name : **Sanggun ROH**

Present Address : Lab of Animal Physiology
Graduate School of Agricultural Science
Tohoku University
Sendai, Miyagi-ken 980-8572, Japan

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2. Education

1987. 3 - 1991. 2 : Bachelor of Agriculture, Dept. of Animal Science
Seoul National University, Republic of Korea

1991. 3 - 1993. 2 : Master of Animal Science
Dept. of Animal Science & Technology
Seoul National University
Seoul, Republic of Korea

1994. 4 - 1997. 3 : Ph.D
The United Graduate School of Agriculture Science
Iwate University, Japan

1997. 5 - 1999. 9 : Post-doctoral Research Fellow
Prince Henry's Institute of Medical Research
Melbourne, Australia

1999.10 - 2003.11 : Assistant Professor
Dept of Food Production Scienc, Faculty of Agriculture
Shinshu Univeristy, Japan

2003.12 – 2009. 3 : Associate Professor
Dept of Food Production Science, Faculty of Agriculture
Shinshu Univeristy, Japan

2009. 4 – 2021.3 : Associate Professor
Dept of Animal Physiology
Graduate School of Agricultural Science
Tohoku University, Japan

2017. 9 – 2019.8 : Adjunct Associate Professor
Seoul National University, Korea

2021. 4 – Present : Professor
Lab of Animal Physiology
Graduate School of Agricultural Science
Tohoku University, Japan

4. Scholarship

The scholarship from Ministry of Education, Science, Sport and Cultures (Japan) during Ph D course (1993.10 - 1997.3)

5. Research & Experience

1993. 3 - 1993. 9 : Special Researcher
Institute of Animal Science & Technology
Dept. of Animal Science & Technology
Seoul National University, Republic of Korea

1993.10 - 1994. 3 : Research Student
Obihiro University of Agriculture & Veterinary Medicine
Obihiro, Japan

1997. 5 - 1999. 9 : Post-doctoral Research Fellow
Supervisor: Dr. Chen Chen
Prince Henry's Institute of Medical Research
Monash Medical Center
Melbourne, Australia

2002.10 - 2002.12 : Visiting Research Professor
Prince Henry's Institute of Medical Research
Monash Medical Center
Melbourne, Australia

2004. 6 - 2004. 8 : Visiting Research Professor
Center of Biochemistry
Universite de Nice-Sophia Antipolis
Faculte des Science, Nice, France

2009. 5 – 2009.10 : Visiting Research Professor
Dept of Animal Science
North Carolina State University
Raleigh, NC, USA

2017. 11 – 2019.8 : Adjunct Associate Professor
Dept of Animal Science
Seoul National University
Seoul, Republic of Korea

6. Award

2016. 6 The Ito Foundation Award
(Study on the characterization of novel adipocyte-derived regulator related with carcass traitof high-qulaity beef)

2012.11 2nd Woogene B&G Award of The 15th AAAP Animal Sicence Congress (Thailand, November 26)
(Lipid metabolism and endocrine regulation in farm animals)

2007.11 Japan Prize in Agricultural Sciences, Achievement Award for Young Scientist
（Characterization of Molecular Mechanism of Fat accumulation in Domestic Animals）

2003.03 Award for Young Scientist from Japanese Society of Animal Science
（Study on the physiological roles of growth hormone secretagogues receptor in ruminants）

7. Publication (2015-Present)

1. Kim, M., Masaki, T., Ikuta, K., Iwamoto, E., Uemoto, Y., Terada, F. and **Roh S (Corresponding author)**, 2022. Changes in the liver transcriptome and physiological parameters of Japanese Black steers during the fattening period. Scientific reports, 12(1), pp.1-15.
2. Zhang Y, Otomaru K, Oshima K, Goto Y,Oshima I,Susumu Muroya,Mitsue h Sano M, Saneshima R, Nagao Y, Kinoshita A, Okamura Y, **Roh S**, Ohtsuka A, Gotoh T. Effects of low and high levels of maternal nutrition consumed for the entirety of gestation on the development of muscle, adipose tissue, bone, and the organs of Wagyu cattle fetuses. Animal Science Journal. 2021 Dec;92(1):e13600. https://doi.org/10.1111/asj.13600
3. Suzuki Y, Chiba S, Nishihara K, Nakajima K, Hagino A, Kim WS, Lee HG, Nochi T, Suzuki T, **Roh SG (Corresponding author)**. Chemerin regulates epithelial barrier function of mammary glands in dairy cows. Animals. 2021 Nov;11(11):3194. https://doi.org/10.3390/ani11113194
4. Muroya S, Zhang Y, Kinoshita A, Otomaru K, Oshima K, Gotoh Y, Oshima I, Sano M, **Roh S**, Oe M, Ojima K, Gotoh T. 2021. Maternal Undernutrition during Pregnancy Alters Amino Acid Metabolism and Gene Expression Associated with Energy Metabolism and Angiogenesis in Fetal Calf Muscle. Metabolites. 11(9):582. https://doi.org/10.3390/metabo11090582
5. Haga S, Ishizaki H, **Roh S**. 2021. The Physiological Roles of Vitamin E and Hypovitaminosis E in the Transition Period of High-Yielding Dairy Cows. Animals 11(4):1088
6. Ono T, Hisaeda K, Inoue ., Yamada Y, Shibano K, Mitsui I, Henmi C, Une Y, Hayashi H, **Roh S**. Nohara M, Uchida E, Nagahata H. 2021. Forestomach developmental failure in an 11-month-old Japanese Black steer with severely retarded growth and chronic ruminal tympany. Journal of Veterinary Medical Science, 83(2), 220-225
7. Murakami, H., Yajima, Y., Sato, F., Kamisuki, S., Taharaguchi, S., Onda, K., **Roh, S.**, Uchiyama, J., Sakaguchi, M. & Tsukamoto, K. 2020. Development of multipurpose recombinant reporter bovine leukemia virus. Virology, 548, 226-235.
8. Kim, W. S., Ghassemi Nejad, J., **Roh, S. G.** & Lee, H. G. 2020. Heat-Shock Proteins Gene Expression in Peripheral Blood Mononuclear Cells as an Indicator of Heat Stress in Beef Calves. Animals, 10, 895.
9. Nishihara, K., Suzuki, Y. & **Roh SG (Corresponding author)**. 2020. Ruminal epithelial insulin-like growth factor-binding proteins 2, 3, and 6 are associated with epithelial cell proliferation. Animal Science Journal, 91, e13422.

10. Nishihara, K., Suzuki, Y., Kim, D., **Roh SG (Corresponding author)**. 2019. Growth of rumen papillae in weaned calves is associated with lower expression of insulin-like growth factor-binding proteins 2, 3, and 6. Animal Science Journal. 90:1287–1292. https://doi.org/10.1111/asj.13270
11. Shimazu, T., Borjigin, L., Katoh, K., **Roh SG**, Kitazawa, H., Abe, K., Suda, Y., Saito, H., Kunii, H., Nihei, K., Uemoto, Y., Aso, H., Suzuki, K. 2019. Addition of Wakame seaweed (Undaria pinnatifida) stalk to animal feed enhances immune response and improves intestinal microflora in pigs. Animal Science Journal. 90(9):1248-1260. doi: 10.1111/asj.13274.
12. Darhan, H., Zoda, A., Kikusato, M., Toyomizu, M., Katoh, K., **Roh SG**, Ogawa, S., Uemoto, Y., Satoh, M., Suzuki, K. 2019. Correlations between mitochondrial respiration activity and residual feed intake after divergent genetic selection for high- and low- oxygen consumption in mice. Animal science journal 90, 818-826. https://doi.org/10.1111/asj.13210
13. **Roh S (Corresponding author)**, Kimura N, Sakamoto K, Nishihara K, Suzuki K, Katoh K. 2018. Effects of butyrate supplementation in antibiotic-free milk replacer and starter on growth performance in suckling calves. Animal Science Journal 89:1486-1491. (Peer reviewed)
14. Nakano M, Suzuki Y, Haga S, Yamauchi E, Kim D, Nishihara K, Nakajima K, Gotoh T, Park S, Baik M, Katoh K, **Roh SG (Corresponding author)**. 2018. Downregulated Angiopoietin-like Peptide 8 Production at Calving Related to Changes in Lipid Metabolism in Dairy Cows. Journal of Animal Science. 96(7):2646-2658. doi: 10.1093/jas/sky162. (Peer reviewed)
15. Nishihara K, Kato D, Suzuki Y, Kim D, Nakano M, Yajima Y, Haga S, Ishizaki H, Kawahara-Miki R, Kono T, Katoh K, **Roh SG (Corresponding author)**. 2018. Comparative transcriptome analysis of rumen papillae in suckling and weaned Japanese Black calves using RNA sequencing. Journal of Animal Science 96, 2226-2237. doi: 10.1093/jas/skx016. (Peer reviewed)
16. Haga S, Miyaji M, Nakano M, Ishizaki H, Matsuyama H, Katoh K, **Roh SG**. 2018. Changes in the expression of alpha-tocopherol-related genes in liver and mammary gland biopsy specimens of peripartum dairy cows. Journal of Dairy Science 101 :5277-5293. doi: 10.3168/jds.2017-13630. (Peer reviewed)
17. Darhan H, Kikusato M, Toyomizu M, **Roh SG**, Katoh K, Sato M, Suzuki K. 2017. Selection for high and low oxygen consumption-induced differences in maintenance energy requirements of mice. Animal Science Journal 88(7):959-965. doi: 10.1111/asj.12740. (Peer reviewed)
18. Suzuki K, Shioura H, Yokota S, Katoh K, **Roh SG**, Iida F, Komatsu T, Syoji N, Sakuma H, Yamada S. 2017. Search for an index for the taste of Japanese Black cattle beef by panel testing and chemical composition analysis. Animal Science Journal 88(3):421-432. doi: 10.1111/asj.12663. (Peer reviewed)
19. Suzuki Y, Haga S, Nakano M, Ishizaki H, Nakano M, Song SH, Katoh K, **Roh SG (Corresponding author)**. 2016. Postweaning changes in the expression of chemerin and its receptors in calves are associated with the modification of glucose metabolism. Journal of Animal Science 94(11):4600-4610. (Peer reviewed)
20. Yokoyama J, Morioka M, Inoue H, Yonei Y, Suzuki K. Katoh K, **Roh SG (Corresponding author)**. 2016. Iodine-enriched egg reduced total body fat and visceral fat among normal individuals: A placebo-controlled,

randomized, double-blind study. Glycative Stress Research 3(3):172-176 (Peer reviewed)

21. Ilavenil S, Kim DH, Vijayakumar M, Srigopalram S, **Roh SG**, Arasu MV, Lee JS, Choi KC. 2016. Potential role of marine algae extract on 3T3-L1 cell proliferation and differentiation: an in vitro approach. Biological Research 49(1): 38.
22. Borjigin L, Shimazu T, Katayama Y, Li M, Satoh T, Watanabe K, Kitazawa H, **Roh SG**, Aso H, Katoh K, Uchida T, Suda Y, Sakuma A, Nakajo M, Suzuki K. 2016. Immunogenic properties and mycoplasmal pneumonia of swine (MPS) lung lesionsin Large White pigs selected for higher peripheral blood immune capacity. Animal Science Journal 87(5) :638-645 (Peer reviewed)
23. Borjigin L, Shimazu T, Katayama Y, Li M, Satoh T, Watanabe K, Kitazawa H, **Roh SG**, Aso, H, Katoh K, Takafumi Uchida, Suda Y, Sakuma A, Nakajo M, Suzuki K. 2017. Immunogenic properties of Landrace pigs selected for resistance to mycoplasma pneumonia of swine. Animal Science Journal 87(3):321-9. doi: 10.1111/asj.12440 (Peer reviewed)
24. Hirayama T, Hirakawa M, Oikawa T, **Roh SG**, Hayashi H. 2016. Sensory research of soup of goat meat in Okinawa. J. Warm Regional Society of Anim. Sci.59(1) :17-21.
25. Kato D, Suzuki Y, Haga S, So KH, Yamauchi E, Nakano M, Ishizaki H, Choi KC, Katoh K, **Roh SG (Corresponding author)**. 2016. Utilization of digital differential display to identify differentially expressed genes related to rumen development. Animal Science Journal 87: 584–590 (Peer reviewed)
26. **Roh SG**, Suzuki Y, Gotoh T, Tatsumi R, Katoh K. 2016. Physiological roles of adipokines, hepatokines, and myokines in ruminants. Asian-Australian Journal of Animal Science 29(1):1-15. doi: 10.5713/ajas.16.0001R. (Invited review)
27. 鈴木裕、中野美智、芳賀聡、中島恵一、加藤和雄、**盧尚建**. 2015. 反芻動物におけるヘパトカインとしての Chemerin と ANGPTL8 の発現調節. 家畜栄養生理研究会会報 59(2):59-68.（査読有）
28. Chen S, Tanaka S, Ogura S, **Roh SG**, Sato S. 2015. Effect of Suckling Systems on Serum Oxytocin and Cortisol Concentrations and Behavior to a Novel Object in Beef Calves. Asian-Australian Journal of Animal Science 28(11):1662-1668. (Peer reviewed)
29. Suzuki Y*, Haga S*, Katoh D, So KH, Choi KC, Jung US, Lee HG, Kazuo K, **Roh SG (Corresponding author)**. 2015. Chemerin is a novel regulator of lactogenesis in bovine mammary epithelial cells. Biochemical and Biophysical Research Communications. 466(3): 283-288 (Peer reviewed) *Co-First Author
30. Haga S, Nakano M, Ishizaki H, **Roh SG**, Katoh K. 2015. Expression of α-tocopherol-associated genes and α-tocopherol accumulation in Japanese Black (Wagyu) calves with and without α-tocopherol supplementation. Journal of Animal Science. 93:4048–4057 (Peer reviewed)
31. So KH, Suzuki Y, Yonekura S, Suzuki Y, Lee CH, Kim SW, Katoh K, **Roh SG (Corresponding author)**. 2015. Soluble extract of soybean fermented with Aspergillus oryzae GB107 inhibits fat accumulation in cultured 3T3-L1 adipocytes. Nutrition Research and Practice. 9(4):439-444 (Peer reviewed)
32. Yamauchi E, Suzuki Y, So KH, Suzuki K, Katoh K, **Roh SG (Corresponding author)**. 2015. Single Nucleotide Polymorphism in the Coding Region of Bovine Chemerin Gene and Their Associations with Carcass Traits in

Japanese Black cattle. Asian-Australian Journal of Animal Science 28(8):1084-1089 (Peer reviewed)

33. Wang T, Lee SB, Hwang JH, Lim JN, Jung US, Kim MJ, Kang HS, Choi SH, Lee JS, **Roh SG**, Lee HG. 2015. Proteomic analysis reveals PGAM1 altering cis-9, trans-11 conjugated linoleic acid synthesis in bovine mammary gland. Lipid 50(5): 469-481 (Peer reviewed)
34. Wang T, Lim JN, Lee JS, Lee SB, Hwang JH, Jung US, Kim MJ, Hwang DY, Lee SR, **Roh SG**, Lee HG. 2015. Effects of dietary trans-9 octadecenoic acid, trans-11 vaccenic acid and cis-9, trans-11 conjugated linoleic acid in mice. Molecular Medicine Reports 12 :3200-3206 (Peer reviewed)
35. **Roh SG**, Carroll JA, Kim SW. 2015. Effects of fermented soybean meal on innate immunity-related gene expressions in nursery pigs acutely challenged with lipopolysaccharides. Animal Science Journal 86(5):508-516. (Peer reviewed)
36. Yi KJ*, So KH*, Hata Y, Suzuki Y, Kato D, Watanabe K, Aso H, Kasahara Y, Nishimori K, Chen C, Katoh K, **Roh SG (Corresponding author)**. 2015. The regulation of oxytocin receptor gene expression during adipogenesis. J. Neuroendocrinology 27 :335-342 (Peer reviewed) * :Co-First Author