Name: Professor Myunggi Baik, Ph. D

Current Position:

Professor

Major in Animal Science and Biotechnology

Department of Agricultural Biotechnology,

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Education and careers:

2013.02 - Present: Professor at Seoul National University, Seoul, Republic of Korea

1992-2013.01: Professor at Chonnam National University, Gwangju

2009-2012: Director, World Class University "Regulatory Network of Nutrient Metabolism" Institute supported by National Research Foundation of Korea

2008-2012: Leader, Nutrigenomics National Research Lab Project supported by National Research Foundation of Korea

2005-2006: Visiting Professor, Michigan State University with Mike VandeHaar, USA

1991-1992: Postdoctoral training with Dr. L. Hennighausen; LBM, NIDDK, NIH, USA

1988-1991: Ph. D. with professor C.S. Park in Animal Sciences, North Dakota State Univ., Fargo, USA

1986-1988: M.S. in Animal Science, Seoul National University, Korea

1979-1986: B.S. in Animal Science, Seoul National University, Korea

Professional affiliations/Societies:

President, the Korean Society of Rumen Function Studies (2018 - present)

Member, Korean Society of Animal Science & Technology (1992 – present)

Member, Korean Society of Molecular & Cellular Biology (1992- present)

Board of Representative, Korean Society of Molecular & Cellular Biology (2008- present)

Member, American Animal Science Association (2000 – present)

Editorial member:

Associate Editor, Animal Bioscience (2020- present)

Research area:

- Nutrigenomics on beef production
- Studies on development of feeding/management systems for improvement of beef production, feed efficiency, and beef quality and taste in cattle
- Ruminant stress mitigation and welfare
- Rumen microbiome and methane mitigation

Website: http://ruminant.snu.ac.kr

Publication in Journal (Selected: 2012-2021)

1. Sang Weon Na , Byung Hee Chun, Seok-Hyeon Beak, Shehzad Abid Khan , Md Najmul Haque, Jae Sung Lee, Che Ok Jeon, Sang-Suk Lee, **Myunggi Baik.** (2021) Pseudoprevotella muciniphila gen. nov., sp. nov., a mucin-degrading bacterium attached to the bovine rumen epithelium. PLoS One. 20;16(5):e0251791
2. Seok-Hyeon Beak, Seung Ju Park, Dilla Mareistia Fassah, Hyun Jin Kim, Minsu Kim, Cheorun Jo, **Myunggi Baik**. (2021) Relationships among carcass traits, auction price, and image analysis traits of marbling characteristics in Korean cattle beef. Meat Sci. 171(2021):108268.
3. Seung Ju Park, Minyu Piao, Hyunjin Kim, Hyeok Joong Kang, Dilla Mareistia Fassaha, Da Jin Sol Jung, Sang Yeob Kim, Sang Weon Na, Myunghoo Kim, **Myunggi Baik.** (2020) Effects of dehorning and lidocaine-plus-flunixin

treatment on indicators of stress and acute inflammation, behaviors, and their association in Korean cattle bull calves. Livestock Science. 241:104198.

4. Hyeok Joong Kang, Jinoh Lee, Seung Ju Park, Dajinsol Jung, Sang Weon Na, Hyun Jin Kim, **Myunggi Baik.** (2020) Effects of cold temperature and fat supplementation on growth performance and rumen and blood parameters in early fattening stage of Korean cattle steers. Anim. Feed Sci. Technol. 269(2020):114624.
5. **Myunggi Baik**, Jin Young Jeong , Seung Ju Park, Seon Pil Yoo , Jin Oh Lee, Jae Sung Lee, Md Najmul Haque , Hyun-Jeong Lee. (2020) Testosterone deficiency caused by castration increases adiposity in male rats in a tissue-specific and diet-dependent manner. Genes Nutr. 15(14):1-10.
6. Sang Weon Na, Seung Ju Park, Soo Jong Hong, **Myunggi Baik.** (2020) Transcriptome changes associated with fat deposition in the *longissimus thoracis* of Korean cattle following castration. J Anim Physiol Anim Nutr. 2020:1–10.
7. Da Jin Sol Jung & **Myunggi Baik**. (2019) Up-regulation of bone morphogenetic protein and its signaling molecules following castration of bulls and their association with intramuscular fat content in Korean cattle. Scientific Reports 19807 (2019).
8. Park SJ, Kang HJ, Na S, Lee SH, **Baik M**. (2018) Differential expression of extracellular matrix and integrin genes in the longissimus thoracis between bulls and steers and their association with intramuscular fat contents. Meat Sci. 136:35-43.
9. **Baik M**, Kim J, Piao MY, Kang HJ, Park SJ, Na SW, Ahn SH, Lee JH. (2017) Deletion of liver-specific STAT5 gene alters the expression of bile acid metabolism genes and reduces liver damage in lithogenic diet-fed mice. Journal of Nutritional Biochemistry. 39:59-67
10. **Baik M**., Kang HJ, Park SJ, Na SW, Piao M, Sang, Kim SY, Fassah, DM, Moon, YS. (2017) TRIENNIAL GROWTH AND DEVELOPMENT SYMPOSIUM: Molecular mechanisms related to bovine intramuscular fat deposition in the longissimus muscle. J Animal Science. 95(5):2284-2303.
11. **Baik M**., Lee M.S., Kang H.J., Park S.J., Piao M.Y., Nguyen T.H., Hennighausen L. (2017) Muscle-specific deletion of signal transducer and activator of transcription 5 augments lipid accumulation in skeletal muscle and liver of mice in response to high-fat diet. European Journal of Nutrition. 56(2):569-579.

12. **Myunggi Baik**, Yoon Seok Nam, Min Yu Piao, Hyeok Joong Kang, Seung Ju Park, Jae-Hyuk Lee. (2016) Liver-specific deletion of the signal transducer and activator of transcription 5 gene aggravates fatty liver in response to a high-fat diet in mice. J Nutr Biochem. 29:56-63.
13. **Baik M**, Rajasekar P, Lee MS, Kim J, Kwon DH, Kang W, Nguyen TH, Vu TT. (2014) An intrauterine catch-up growth regimen increases food intake and post-natal growth in rats. J Anim Physiol Anim Nutr (Berl). 98(6):1132-1142.
14. Kyung Hyun Yoo, **Myunggi Baik**, Lothar Hennighausen. Context-Specific Growth Hormone Signaling through the Transcription Factor STAT5: Implications for the Etiology of Hepatosteatosis and Hepatocellular Carcinoma. Genes Cancer. 2(1):3-9
15. J Y Jeong , J S Kim, T H Nguyen, H-J Lee, **M Baik**. (2013) Wnt/β-catenin signaling and adipogenic genes are associated with intramuscular fat content in the longissimus dorsi muscle of Korean cattle. Anim Genet. 44(6):627-35.
16. J Jeong , J Bong, G D Kim, S T Joo, H-J Lee, **M Baik**. (2013) Transcriptome changes favoring intramuscular fat deposition in the longissimus muscle following castration of bulls. J Anim Sci. 91(10):4692-704.
17. Bong JJ, Jeong JY, Rajasekar P, Cho YM, Kwon EG, Kim HC, Paek BH, **Baik. M**. (2012) Differential expression of genes associated with lipid metabolism in longissimus dorsi of Korean bulls and steers. Meat Sci. 91(3):284-93
18. J Jeong, E G Kwon, S K Im, K S Seo, **M Baik.** (2012) Expression of fat deposition and fat removal genes is associated with intramuscular fat content in longissimus dorsi muscle of Korean cattle steers. J Anim Sci. 90(6):2044-53.