

PUBLICATIONS:

Refereed Journal Articles:

- 2014 55. Ji, S., Doumit, M.E. and **Hill, R.A.** (2014). Regulation of adipogenesis and key adipogenic gene expression by 1, 25-dihydroxyvitamin D in 3T3-L1 cells. . *Pflügers Archiv-European Journal of Physiology*. (submitted).
54. Kayser, W., Glaze, J.B., Welch, C.M., Kerley, M. and **Hill, R.A.** (2014). Evaluation of sampling error in the measurement of body weight gain and dry matter intake for the calculation of residual feed intake in growing purebred Charolais and Red Angus cattle. *Journal of Animal Science*. (in review).
53. McGee, M., Welch, C.M., Ramirez, J.A., Carstens, G.E., Price, W.J., Hall, J.B. and **Hill, R.A.** (2014). Relationships of feeding behaviors with ADG, DMI, and residual feed intake (RFI) in Red Angus-sired cattle. *Journal of Animal Science* (accepted).
52. Acharya, S., Stark, T., Matsutomo, T., Hofmann, T., **Hill, R.A.** and Balemba, O.B. (2014). Antioxidant properties of Manniflavanone: a potential dietary supplement protective in muscle. *Pflügers Archiv-European Journal of Physiology*. (in revision).
51. Chapalamadugu, K.C., Murdoch, B.M., Sarver, B.A.J., Robison, B.D., **Hill, R.A.** and Murdoch, G.K. (2014). Rainbow trout Pax7 sequence and comparative analyses with other species variants. *Comparative Biochemistry & Physiology Part D: Genomics and Proteomics* (in revision).
50. McGee, M., Ramirez, J.A., Carstens, G.E., Price, W.J., Hall, J.B. and **Hill, R.A.** (2014) Relationships of Feeding Behaviors with Residual Feed Intake (RFI) in RFI-divergent Japanese Black Cattle. *Journal of Animal Science*. doi: 10.2527/jas.2013-7360.
49. Acharya, S. and **Hill, R.A.** (2014). High efficacy gold-KDEL peptide-siRNA nanoconstruct-mediated transfection in C2C12 myoblasts and myotubes. *Nanomedicine: Nanotechnology, Biology and Medicine*. 10:329-337.
- 2013 48. Welch, C. M., Thornton, K.L., Murdoch, G. K., Chapalamadugu, K., Schneider, C. S., Ahola, J. K., Hall, J.B., Price, W. and **Hill, R.A.** (2013). Identification of serum IGF-I concentration, potential candidate genes, and fiber type composition associated with variation in residual feed intake of progeny from Red Angus sires divergent for maintenance energy EPD. *Journal of Animal Science*. 91: 5626-5636.
47. Kayser, W. and **Hill, R.A.** (2013). Relationships between residual feed intake, feeding behaviors, performance and ultrasound carcass measurements in growing purebred Angus and Hereford bulls. *Journal of Animal Science*. 91: 5492-5499.
46. Acharya, S., Peters, A.M., Norton, A.S., Murdoch, G.K. and **Hill, R.A.** (2013). Change in Nox4 expression is accompanied by changes in myogenic marker expression in differentiating C2C12 myoblasts. *Pflügers Archiv-European Journal of Physiology*. 465: 1181-1196.
45. Wang, G., Norton, A.S., Pokharel, D., Song, Y. and **Hill, R.A.** (2013). KDEL Peptide Gold Nanoconstructs: A Promising Nanoplatform for Drug Delivery. *Nanomedicine: Nanotechnology, Biology and Medicine*. 9: 366-374.
44. McGee, M., Welch, C.M., Hall, J.B., Small, W. and **Hill, R.A.** (2013). Optimizing Feed Efficiency, Growth and Marbling in Wagyu Cattle. *Professional Animal Scientist*. 29: 51-56.
- 2012 43. Welch, C.M., Ahola, J.K., Hall, J.B., Murdoch, G.K., Crews Jr., D.H., Szasz, J.I., Davis, L.C., Doumit, M.E., Price, W.J., Keenan, L.D. and **Hill, R.A.** (2012). Relationships among performance, residual feed intake, and product quality of progeny from Red Angus sires divergent for maintenance energy EPD. *Journal of Animal Science*. 90: 5107-5117.

Refereed Journal Articles:

42. Wacyk, J., Powell, M., Rodnick, K., Overturf, K., **Hill, R.A.** and Hardy, R.W. (2012). Dietary protein source significantly alters growth performance, plasma parameters and hepatic transcriptional activity in rainbow trout (*Oncorhynchus mykiss*) fed amino acid balanced diets. *Aquaculture*. 356: 223-234.
41. Papasani, M.R., Wang, G., and **Hill, R.A.** (2012). Gold nanoparticles: the importance of physiological principles to devise strategies for targeted drug delivery. *Nanomedicine: Nanotechnology, Biology and Medicine*. 8: 804-814.
40. Snyder, G.S., Gaylord, T.G., Barrows, F.T., Overturf, K., Cain, K.D., **Hill, R.A.** and Hardy, R.W. (2012). Effects of Carnosine Supplementation to an all-Plant Protein Diet for Rainbow Trout (*Oncorhynchus mykiss*). *Aquaculture*. 338: 72-81.
39. Cheguru, P., Chapalamadugu, K.C., Doumit, M.E., Murdoch, G.K. and **Hill, R.A.** (2012). Adipocyte differentiation-specific gene transcriptional response to C18 unsaturated fatty acids plus insulin. *Pflügers Archiv-European Journal of Physiology*. 463: 429-447
- 38 Thornton, K.J., Welch, C.M., Davis, L.C., Doumit, M.E., **Hill, R.A.** and Murdoch, G.K. (2012). Bovine sire selection based upon maintenance energy impacts muscle fiber type and meat color of F1 progeny. *Journal of Animal Science*. 90: 1617-1627.
37. Wang, G., Papasani, M.R., Cheguru, P., Hrdlicka, P.J. and **Hill, R.A.** (2012). Gold-Peptide Nanoconjugate Cellular Uptake is modulated by Serum Proteins. *Nanomedicine: Nanotechnology, Biology and Medicine*. 8:822-832.
- 2011 36. Julien, D.C., Behnke, S., Wang, G., Murdoch, G.K. and **Hill, R.A.** (2011). Utilization of Monoclonal Antibody-Targeted Nanomaterials in the Treatment of Cancer. *mAbs* 3:467-478.
35. Ahola, J.K., Skow, T.A., Hunt, C.W. and **Hill, R.A.** (2011). Relationship Between Residual Feed Intake and End Product Palatability in Longissimus Steaks from Steers Sired by Angus Bulls Divergent for Intramuscular Fat Expected Progeny Difference. *Professional Animal Scientist*.27:109-115.
34. Kriegel, C., Koehne, J., Tinkle, S, Maynard, A. and **Hill, R.A.** (2011). Challenges of Trainees in a Multidisciplinary Research Program: Nano-Biotechnology. *Journal of Chemical Education*. 88:53-55.
- 2010 33. Østergaard, M., Cheguru, P., Papasani, M.R., **Hill, R.A.** and Hrdlicka, P.J. (2010) Glowing Locked Nucleic Acids (LNAs) – Brightly Fluorescent Probes for Detection of Nucleic Acids in Cells. *Journal of the American Chemical Society*. 132:14221-14228.
32. Wulfhorst, J.D., Ahola, J.K., Kane, S.L., Keenan, L.D. and **Hill, R.A.** (2010). Factors affecting beef cattle producer perspectives on feed efficiency. *Journal of Animal Science*. 88: 3749-3758.
31. Smith, N.N., Kelly, M.J., Pell, J.M. and **Hill, R.A.** (2010) Administration of bovine anti-IGF-1 Immunoglobulin to dietary protein deficient rats alters dietary intake and plasma IGF-1 binding profiles, but does not affect change in body mass. *Animal*. 4:1553-1560.
30. Julien. D.C., Richardson, C.C., Beaux II, M.F., McIlroy, D.N. and **Hill, R.A.** (2010). *In vitro* proliferating cell models to study cytotoxicity of silica nanowires. *Nanomedicine: Nanotechnology, Biology, and Medicine*. 6:84-92.
- 2009 29. Allen, J.D., Ahola, J.K., Chahine, M., Szasz, J.I., Hunt, C.W., Schneider, C.S., Murdoch, G.K. and **Hill, R.A.** (2009). Effect of feeding period and ractopamine hydrochloride on feedlot performance, carcass characteristics, and end product quality in market dairy cows. *Journal of*

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- Animal Science*. 87: 2400-2408.
28. Chapalamadugu, K.C., Robison, B.D., Drew, R.E., Powell, M.S., **Hill, R.A.**, Amberg, J.J., Rodnick, K.J., Hardy, R.W., Hill, M.L. and Murdoch, G.K. (2009). Dietary carbohydrate level affects transcription factor expression that regulates skeletal muscle myogenesis in rainbow trout. *Comparative Biochemistry and Physiology (Part B)*. 153: 66-72.
- 2008 27. Drew, R.E., Rodnick, K.J., Settles, M., Wacyk, J., Churchill, E., Powell, M., Hardy, R.W., Murdoch, G.K., **Hill, R.A.** and Robison, B.D. (2008). Effect of starvation on the transcriptomes of the brain and liver in adult female zebrafish (*Danio rerio*). *Physiological Genomics*. 35: 283-295.
26. **Hill, R.A.**, Flint, D. J. and Pell, J.M. (2008). Antibodies as molecular mimics of biomolecules: roles in understanding physiological functions and mechanisms. *Advances in Physiology Education*. 32: 261-273.
25. Robison, B.D., Drew, R.E., Murdoch, G.K., Powell, M., Rodnick, K.J., Settles, M., Stone, D.A.J., Churchill, E., **Hill, R.A.**, Papasani, M.R., Lewis, S.S. and Hardy, R.W. (2008). Sexual dimorphism in hepatic gene expression and the response to dietary carbohydrate manipulation in the zebrafish (*Danio rerio*). *Comparative Biochemistry and Physiology, Part D Genomics and Proteomics* 3:141-154.
- 2007 24. Kokta, T.A., Strat, A.L., Papasani, M.R., Szasz, J.I., Dodson, M.V. and **Hill, R.A.** (2007). Regulation of Lipid Accumulation in 3T3-L1 Cells: Insulin-Independent and Combined Effects of Fatty Acids and Insulin. *Animal*. 2: 92-99.
- 2006 23. Papasani, M.R., Robison, B.D., Hardy, R. W. and **Hill R.A.** (2006). Early developmental expression of two insulins in zebrafish. *Physiological Genomics* 27:79-85.
22. Baker, S.D., Szasz, J.I., Klein, T.A., Kuber, P.S., Hunt, C.W., Glaze Jr., J.B., Falk, D., Richard, R., Miller, J.C., Battaglia, R.A. and **Hill, R.A.** (2006). Residual Feed Intake of Purebred Angus Steers: Effects on Meat Quality and Palatability. *Journal of Animal Science* 84:938-945.
- 2005 21. Strat, A.L., Kokta, T.A., Dodson, M.V., Gertler, A., Wu, Z. and **Hill, R.A.** (2005). Early Signaling Interactions between the Insulin and Leptin Pathways in Bovine Myogenic Cells. *Biochimica et Biophysica Acta* 1744:165-174.
20. Fernyhough, M.E., Helterline, D.L., Vierck, J.L., Hausman, G.J., **Hill, R.A.** and Dodson, M.V. (2005). Dedifferentiation of mature adipocytes to form adipofibroblasts: 1. More than just a possibility *Adipocytes* 1:17-24.
19. Kinkel, A.D., Fernyhough, M.E., Helterline, D.L., Vierck, J.L., Oberg, K.S., Vance, T.J., Hausman, G.J., **Hill, R.A.** and Dodson, M.V. (2005) Oil red-O stains non-adipogenic cells: A precautionary note. *Cytotechnology*. 46:1-8.
- 2004 18. **Hill, R.A.**, Strat, A.L., Hughes, N.J., Kokta, T.A., Dodson, M.V., and Gertler, A. (2004). Early Insulin Signaling Cascade In A Model of Oxidative Skeletal Muscle: Mouse Sol8 Cell Line. *Biochimica et Biophysica Acta*. 1693:205-211.
17. Fernyhough, M.E., Helterline, D.L., Vierck, J.L., **Hill, R.A.** and Dodson, M.V. (2004). Coulter Counter use in the enumeration of muscle and fat stem cells. *Methods in Cell Science* 25(3-4):221-225.
16. Kokta, T.A., Dodson, M.V., Gertler, A. and **Hill, R.A.** (2004). Intercellular Signaling Between Adipose Tissue and Muscle Tissue. *Domestic Animal Endocrinology*. 27: 301-331.
- 2003 15. Hendricksen, R.E., Gazzola, C., Reich, M.M., Roberton, R.F., Reid, D.J., and **Hill, R.A.**

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- (2003) Using molasses as an alternative to controlled release devices for administering n-alkane markers to cattle *Animal Science* 76:471-480.
- 2002 14. Margetic, S., Gazzola, C., Pegg, G.G. and **Hill, R.A.** (2002) Leptin: a review of its peripheral actions and interactions. *International Journal of Obesity and Related Metabolic Disorders* 26:1407-1433.
13. Margetic, S., Gazzola, C., Pegg, G.G. and **Hill, R.A.** (2002) Characterisation of leptin binding in bovine kidney membranes. *Domestic Animal Endocrinology*. 23: 411-424.
12. Gazzola, C., Jeffery, M.R., White, D.H., **Hill, R.A.** and Reid, D.J. (2002) Effect of delayed castration on growth rate, behaviour and serum insulin-like growth factor-1 concentration on beef cattle on tropical pasture. *Animal Science* 75: 41-47.
11. Hendricksen, R.E., Reich, M.M., Robertson, R.F., Reid, D.J., Gazzola, C., Rideout, J.A. and **Hill, R.A.** (2002) Predicting the voluntary intake and digestibility of tropical pasture hays using alkanes *Animal Science* 74:567-577.
- 2001 10. Gazzola, C., Jeffery, M.R., White, D.H., **Hill, R.A.** and Reid, D.J. (2001) Effect of age of castration, oestradiol treatment and genotype on the fat colour of pasture-fed beef cattle. *Animal Science* 73: 261-266.
- 2000 9. Pell, J.M., **Hill, R.A.**, Stewart C.E.H., Weston, C.R., and Flick-Smith, H.C. (2000) Enhancement of IGF-I activity by novel antisera: potential structure/function interactions. *Endocrinology* 141: 741-751.
- 1999 8. **Hill, R.A.**, Hunter, R.A., Lindsay, D.B., and Owens, P.C. (1999) Action of Long (R3)-IGF-1 on protein metabolism in beef heifers. *Domestic Animal Endocrinology* 16: 219-229.
- 1998 7. **Hill, R.A.**, Margetic, S., Pegg, G.G. and Gazzola, C. (1998) Leptin: its pharmacokinetics and tissue distribution. *International Journal of Obesity and Related Metabolic Disorders*. 22: 765-770.
6. **Hill, R.A.**, Hoey, A.J., and Sillence, M.N. (1998) Functional activity of antibodies at the bovine β_2 -adrenoceptor. *Journal of Animal Science* 76: 1651-1661.
5. **Hill, R.A.** and Pell, J.M. (1998) Regulation of Insulin-Like Growth Factor I (IGF-I) Bioactivity in Vivo: Further Characterization of an IGF-I-Enhancing Antibody. *Endocrinology* 139: 1278-1287.
- 1997 4. **Hill, R.A.**, Flick-Smith, H.C., Dye, S., and Pell, J.M. (1997) Actions of an IGF-1 enhancing antibody on IGF-1 pharmacokinetics and tissue distribution: increased IGF-1 bioavailability *Journal of Endocrinology* 152: 123-130.
3. **Hill, R.A.** and Sillence, M.N. (1997) Improved membrane isolation in the purification of β_2 -adrenoceptors from transgenic *Escherichia coli*. *Protein Expression and Purification* 10: 162-167.
- 1995 2. Pell, J.M., Flick-Smith H.C., Dye, S. and **Hill, R.A.** (1995) Further characterization of an IGF-1 enhancing antibody: actions on IGF-induced hypoglycaemia and interaction with the analogue LR3IGF-1. *Progress in Growth Factor Research* 6: 367-75.
- 1994 1. **Hill, R.A.** and Cook, D.R. (1994) Protein profiles of *Brucella suis* and *Brucella abortus* in isoelectric focusing and sodium-dodecyl sulphate polyacrylamide gel electrophoresis. *Veterinary Microbiology*. 39:25-32.

Books

- 2012 **Hill, R.A.** (editor). (2012). Feed Efficiency in the Beef Industry. (with 33 contributors) Wiley-Blackwell, Ames, Iowa.

Book Chapters:

- 2012 **Hill, R.A.** (2012). Introduction. In : **Hill, R.A.** (editor). Feed Efficiency in the Beef Industry. pp 1-6 Wiley-Blackwell, Ames, Iowa.

Ahola, J.K. and **Hill, R.A.** (2012). Input Factors Affecting Profitability: A Changing Paradigm and a Challenging Time. (Chapter 1) In: **Hill, R.A.** (editor). Feed Efficiency in the Beef Industry. pp 7-20. Wiley-Blackwell, Ames, Iowa.

Wulfhorst, J.D., Kane, S., Ahola, J.K., Hall, J.B. and **Hill, R.A.** (2012) Producer Awareness and Perceptions of Feed Efficiency (Chapter 3) In: **Hill, R.A.** (editor). Feed Efficiency in the Beef Industry. pp 29-46. Wiley-Blackwell, Ames, Iowa.

Hill, R.A. and Ahola, J.K. (2012). Interactions with other Traits: Growth and Product Quality. (Chapter 10). In: **Hill, R.A.** (editor). Feed Efficiency in the Beef Industry. pp 145-158. Wiley-Blackwell, Ames, Iowa.

Welch, C.M., McGee, M., Kokta, T.A. and **Hill, R.A.** (2012). Muscle and Adipose Tissue: Potential Roles in Driving Variation in Feed Efficiency. (Chapter 12). In: **Hill, R.A.** (editor). Feed Efficiency in the Beef Industry. pp 175-198. Wiley-Blackwell, Ames, Iowa.

- 2009 Choi, D., McIlroy, D., Nagler, J., Aston, E., Hrdlicka, P., Gustin, K., **Hill, R.**, Stenkamp, D. and Branen, J. (2009). One-dimensional silica structures and their applications to the biological sciences. (Chapter 3) In: Kumar, S.S.R. (ed.) *Nanostructured Oxides for Life Sciences*. Nanomaterials for the Life Sciences, Volume 2. Wiley-VCH, pp 83-108.

- 2004 **Hill, R.A.** (2004). The Role of the Leptin Axis in Modulating Energy Partitioning and Nutrient Utilization in Livestock Species. In: Garnsworthy, P.C. and Wiseman, J. (eds.) *Recent Advances in Animal Nutrition*. Nottingham University Press. Sutton Bonington. U.K. (pp 149-184).

- 2003 **Hill, R.A.**, Pell, J.M. and Flint, D.J. (2003) Immunomodulation of Growth. In: *Biology of Growth of Domestic Animals*. Chapter 18. Scanes, C.G. (ed.). Iowa State Press, Ames.

Hill, R.A., Dunshea, F.R. and Dodson, M.V. (2003) Growth and Livestock. In: *Biology of Growth of Domestic Animals*. Chapter 19. Scanes, C.G. (ed.). Iowa State Press, Ames.

Other Refereed Publications:

Editorials:

- 2013 **Hill, RA.** (2013). All That Glitters: Nano-Gold may Shine new Light on Medicine. *Nanomedicine: Nanotechnology, Biology and Medicine*. 9: (Introduction to virtual issue June).

- 2003 **Hill, RA.** (2003). Leptin quantification: On the steep part of the learning curve. *Animal Science* 76: 1-2.

Department of Primary Industries Technical Report:

- 1997 **Hill, R.A.**, Holmes, M., and Smith, N. (1997). Growth promoting properties of antibodies with activity at the insulin-like growth factor-1 (IGF-1) axis. In Loxton, I. and Boadle, R. (eds.) *Brigalow Research Station Technical Report* 1996 Department of Primary Industries Queensland.

Invited Presentations:

- 2014 **Hill, R.A.**, Welch, C.M., Price, W.J., Ahola, J.K., Speidel, S.E., Hall, J.B., McGee, M., Crews, Jr., D.H., and Schneider, C.S. (2014). Metabolic and Feeding Behaviour Variables for Prediction of Dry Matter Intake of Progeny from Red Angus Sires Divergent for Maintenance Energy. Presented at Teagasc, Grange, Ireland, July 14.

Invited Presentations:

- Hill, R.A.**, Welch, C.M., Schneider, C.S. and Price, W.J., Wulfhorst, J.D., Kane, S. and Ahola, J.K. (2014). Contemporary Issues Impacting Use and Implementation of Beef Cattle Feed Efficiency in the USA. Presented at North-West A and F University, Yangling, P.R. China. July 2.
- Hill, R.A.**, Welch, C.M., Price, W.J., Ahola, J.K., Speidel, S.E., Hall, J.B., McGee, M., Crews, Jr., D.H., and Schneider, C.S. (2014). Residual Feed Intake: Metabolic Variables and Prediction of Dry Matter Intake of Progeny from Red Angus Sires Divergent for Maintenance Energy EPD. Presented at The National Beef Cattle Improvement Center, Yangling, P.R. China. July 3.
- Kayser, W. and **Hill, R.A.** (2014). Evaluation of sampling error in the measurement of body weight gain and dry matter intake for the calculation of residual feed intake in growing purebred Charolais cattle. Proceedings, Western Section, American Society of Animal Science 65: (in review).
- 2013 **Hill, R.A.**, Wang, G., Acharya, S. and Ji, S. (2013). Cellular Trafficking of Gold Nano-Constructs. Nano-Science and Technology Innovations. Washington, DC.
- 2012 **Hill, R.A.**, Welch, C.M., Schneider, C.S., Price, W.J., Wulfhorst, J.D., Kane, S.L. and Ahola, J.K. (2012). Hormones and feed efficiency in beef cattle: where to from here? Charles Sturt University, Australia. December 18, 2012. Wagga Wagga, New South Wales.
- Hill, R.A.**, Welch, C.M., Kane, S.L., Ahola, J.K., Wulfhorst, J.D., Keenan, L., Murdoch, G.K., Crews, Jr., D.H., Doumit, M.E., and Price, W.J. (2011). Idaho Experiment Station Report: Feed Efficiency Research and Outreach. W1010 Regional Project Meeting, Phoenix AZ, July 19, 2012.
- 2011 **Hill, R.A.**, Welch, C.M., Kane, S.L., Ahola, J.K., Wulfhorst, J.D., Hall, J.B., Keenan, L., Murdoch, G.K., Crews, Jr., D.H., Szasz, J.I., Doumit, M.E., and Price, W.J. (2011). Idaho Experiment Station Report: Feed Efficiency Research and Outreach. W1010 Regional Project Meeting, Bozeman, Montana, May 31, 2011.
- Hill, R.A.**, Welch, C.M., Kane, S.L., Ahola, J.K., Wulfhorst, J.D., Hall, J.B., Keenan, L., Murdoch, G.K., Crews, Jr., D.H., Szasz, J.I., Doumit, M.E., and Price, W.J. (2011). Feed Efficiency Research and Outreach for the Beef Industry. National Research Initiative (USDA) Project Director's Meeting, April 18-19, Washington, D.C.
- Hill, R.A.** (2011). Nanotechnology: new tools to influence gene expression for the benefit of animal production. First International Meeting on Genes, Animal Agriculture and Aquaculture. Honolulu, HI. March 18-19, 2011.
- Hill, R.A.**, Welsh, T.H., Poulos, S.P., Gabler, N.K. and Connor, E.E. (2011). Symposium chair's introduction to Growth and Development Symposium: Intestinal development and growth Journal of Animal Science. 89(E suppl.). doi:11.3764/jas.2011-3764.
- 2010 Wulfhorst, J.D., Ahola, J.K., Kane, S.L., Keenan, L.D. and **Hill, R.A.** (2010). Factors affecting beef cattle producer perspectives on feed efficiency. W1010 Regional Project Meeting, Columbia, Missouri, July 1, 2010.
- Hill, R.A.**, Connor, E.E., Poulos, S.P., Welsh, T.H. and Gabler, N.K. (2010). Symposium chair's introduction to Growth and Development Symposium: Fetal programming in animal agriculture. Journal of Animal Science. 88(E suppl.). doi:10.2527/jas.2010-2908.
- Hill, R.A.**, Kane, S.L., Ahola, J.K., Wulfhorst, J.D., Hough, R.L., Bolze Jr., R.P. and Keenan, L. (2010). Feed Efficiency Research and Outreach for the Beef Industry. National Research Initiative (USDA) Project Director's Meeting, July 15-16, Denver, CO.
- 2009 **Hill, R.A.** and Aizen, M. (2009), Symposium chair's introduction to The molecular basis for feed

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- efficiency. *Journal of Animal Science*. 87(E suppl.):E39-E40.
- Hill, R.A.**, Kane, S.L., Ahola, J.K., Wulfhorst, J.D., Hough, R.L., Bolze Jr., R.P. and Keenan, L. (2009). Feed Efficiency Research and Outreach for the Beef Industry. National Research Initiative (USDA) Project Director's Meeting, July 15-16, Montreal, Canada.
- 2008 Ahola, J.K. and **Hill, R.A.** (2008). Defining and Measuring Feed Efficiency. Proc., Pacific Northwest Animal Nutrition Conference, October 7-9, Tacoma, Washington. pp. 157-162.
- Hill, R.A.**, Kane, S.L., Ahola, J.K., Wulfhorst, J.D., Hough, R.L., Bolze Jr., R.P. and Keenan, L. (2008). Feed Efficiency Research and Outreach for the Beef Industry. National Research Initiative (USDA) Project Director's Meeting, July 6-7, Indianapolis, IN.
- 2007 **Hill, R.A.** and Ahola, J.K. (2007), Implementation of Residual Feed Intake in the United States Beef Industry. Oregon Cattlemen's Association Annual Meeting, Redmond OR.
- 2005 **Hill, R.A.**, Baker, S.D., Klein, T.A., Szasz, J.I., Ahola, J.K., Hristov, A.N., Price, W., Huhtanen, P. and Sariola, J. (2005). Net Feed Efficiency: Possibilities for the Future. Pacific Northwest Animal Nutrition Conference. pp 199-210.
- Hill, R.A.** (2005). Fat Mice, Muscle Men and the Supersize Culture. Human Nutrition, Food and Animal Sciences, University of Hawaii at Manoa. June 30.
- Hill, R.A.** (2005). Leptin-Insulin Axis Cross-talk in a Bovine Myogenic Cell Model, Charles Sturt University, Wagga Wagga, Australia, June 28, 2005.
- 2004 **Hill, R.A.** (2004). Leptin Axis: Regulation of Energy Substrate Partitioning in Ruminants. Department of Animal Sciences, Purdue University. November 16.
- Hill, R.A.** (2004). The Role of the Leptin Axis in Modulating Energy Partitioning and Nutrient Utilization in Livestock Species. The 38th Nottingham Feed Conference. University of Nottingham. Sutton Bonington. U.K. September 14-16.

Conference Articles:

- 2014 90. Kayser, W. and **Hill, R.A.** (2014). Analysis of sampling error in the measurement of body weight gain and dry matter intake for the calculation of residual feed intake in growing purebred Charolais cattle. Proceedings of the Western Section, American Society of Animal Science. (abstract) (submitted).
89. Ji, S., Du, M. and **Hill, R.A.** (2014). Regulation of adipogenesis and key adipogenic gene expression by retinoic acid in 3T3 -L1 preadipocytes. *Journal of Animal Science*. (abstract) (submitted).
88. Welch, C.M., Speidel, S.E., Crews, Jr., D.H., Ahola, J.K., Hall, J.B., Price, W.J. and **Hill, R.A.** (2014). Relationships between maintenance energy EPD and performance measures of progeny from Red Angus sires divergent for maintenance energy EPD. *Journal of Animal Science*. (abstract) (submitted).
87. McGee, M., Welch, C.M., Ramirez, J.A., Carstens, G.E., Price, W.J., Hall, J.B. and **Hill, R.A.** (2014). Relationships among feeding behaviors and performance traits of growing and finishing phase Red Angus cattle. *Journal of Animal Science*. (abstract) (submitted).
- 2013 86. Welch, C.M., Speidel, S.E., Price, W.J., Ahola, J.K., Hall, J.B., Murdoch, G.K., Crews, Jr., D.H., Schneider, C.S. and **Hill, R.A.** (2013). Relationships between residual feed intake EPD and metabolic variables of progeny from Red Angus sires divergent for maintenance energy EPD. *Journal of Animal Science*. 91 (E suppl. 2):187.
85. McGee, M., Ramirez, J.A., Carstens, G.E., Hall, J.B. and **Hill, R.A.** (2013). Relationships of

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- Various Feeding Behavior Indicia with Divergent Residual Feed Intake Measurements in Japanese Black Cattle. *Journal of Animal Science*. 91 (E suppl. 2):379.
84. Ji, S., Cheguru, P., Acharya, S. and **Hill, R.A.** (2013). Regulation of adipogenesis and key adipogenic gene expression by nutritional molecules. *Experimental Biology*. Boston, April 20-25.
83. Acharya, S. Peters, A.M., Norton, A.S., Murdoch, G.K. and **Hill, R.A.** (2013). NADPH oxidase 4-mediated ROS generation modulates C2C12 differentiation via ERK1/2 pathway. *Experimental Biology*. Boston, April 20-25.
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 4. Pell, J.M., **Hill, R.A.**, Dye, S., and Flick-Smith, H.C. (1996) Further characterization of an IGF-1 enhancing antibody. Journal of Endocrinology 148(suppl.): p96.
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 - 1995 2. **Hill, R.A.**, Dye, S., Sheldrick, E.L., Flick-Smith, H.C. and Pell, J.M. (1995) Regulation of plasma clearance and tissue distribution of Insulin-Like Growth Factor-1 (IGF-1) by an IGF-1 enhancing antibody. Journal of Endocrinology 144(suppl.):p63.
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NCBI-GenBank Submissions:

- 2011 4. Chapalamadugu, K.C., Murdoch, B.M., Robison ,B.D., **Hill, R.A.** and Murdoch, G.K. (2011). *Oncorhynchus mykiss* paired box 7 alpha gene (pax7 alpha) mRNA, splice variant 1. Sequences 1 through 11 Accession Nos. JQ303311, JQ303312, JQ303313,, JQ303320 and JQ303321. Submitted December 18, 2011.

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- 2007 2. Amberg, J.J., Anderson, C.L., **Hill, R.A.**, Rust, M.B. and Hardy, R.W. (2007). Identification of PepT1 in China rockfish, *Sebastes nebulosus* Accession No. EU160494, submitted September 17, 2007.
- 2005 1. Papasani, M.R., Robison, B.D., Hardy, R.W. and **Hill, R.A.** (2005) Expression of zebrafish insulin-2, 498 bp mRNA linear. Accession No. DQ156497, submitted August 4, 2005.

Provisional Patents:

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- 2013 Balemba, O.B., **Hill, R.A.**, Stark, T. and Hofmann, T. *Garcinia Buchananii* (Baker) Compounds, compositions and related methods 08-032 – US Patent Application No. 548948 (UIC-09-1). July 25, 2013.
- 2008 **Hill, R.A.** Use of endogenous cellular internalization signaling peptides to carry nanostructures and/or bioactive molecules into cells. 08-032 – US Patent Application No. 61113118. November 12, 2008.
- 1995 **Hill, R.A.** and Sillence, M.N. 1995 Australian Patent Application No. PM9972.
- 1994 **Hill, R.A.** and Sillence, M.N. 1994 Australian Patent Application No. PM7084.

Note: The right to publish all work associated with 94-95 patent applications was delayed. Publication of this work began in 1997. This includes all of the work of my Ph.D. Thesis.

Special Presentations Leadership:

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- 2012 **Hill, R.A.** and Medvitz, A. Symposium Organizing Committee (2012). American Association for the Advancement of Science, National Meeting. Symposium: Sub-Saharan Africa: Livestock science brings new hope and faces new challenges. February 17-20. Vancouver, Canada.
- 2010 **Hill, R.A.** and Branen, L.: Symposium Organizing Committee (2010). American Association for the Advancement of Science, National Meeting. Symposium: Healthy and Plentiful Animal-Based Foods: Science Offers New Possibilities. February 18-22. San Diego.
- 2009 **Hill, R.A.**, Tinkle, S. and Maynard, A.D.: Symposium Organizing Committee (2009). American Association for the Advancement of Science, National Meeting. Symposium: From Donuts to Drugs: Nano-Bio-technology Evolution or Revolution? February 13-16. Chicago.

Outreach Presentations and Papers (Invited):

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- 2012 **Hill, R.A.**, Wulfhorst, J.D., Kane, S, Welch, C.M. and Ahola, J.K. (2012). Controlling the cost of beef production through improving feed efficiency. National Institute for Animal Agriculture National Meeting. March 27, Denver CO.
- Hill, R.A.**, Wulfhorst, J.D., Kane, S, Welch, C.M, Hall, J.B. and Ahola, J.K. (2012). Improving Cattle Feed Efficiency. Bonner-Boundary Cattle Assoc. Beef School, Feb 4, Ponderay, ID
- 2010 Welch, C.M., Wulfhorst, J.D. Kane, S.L., Ahola, J.K., Hall, J.B. and **Hill, R.A.** (2010). Residual Feed Intake: Improving Feed Efficiency. Nancy M Cummings Research, Education and Extension Center, Salmon ID.
- 2009 Ahola, J.K. and **Hill, R.A.** (2009). Selecting for Efficiency of Feed Utilization: Now and in the Future. Western Beef Resources Committee – Cattle Producer's Library Fact Sheet. CL1025.
- Welch, C.M., Ahola, J.K., Szasz, J.I., Hall, J.B., Keenan, L.D. and **Hill, R.A.** (2009). Evaluation of Feed Efficiency. Nancy M Cummings Research, Education and Extension Center, Salmon ID.
- Hill, R.A.**, Welch, C.M., Szasz, J.I., Hall, J.B., Keenan, L.D. and Ahola, J.K. (2009). Evaluating the feed efficiency and end-product quality relationship in the progeny of Red Angus sires

Outreach Presentations and Papers (Invited):

- divergent for Maintenance Energy EPD: A project overview. Beef Improvement Federation, National Meeting, April, Sacramento, CA.
- Ahola, J.K., Kane, S.L., Wulforth, J.D., Keenan, L.D. and **Hill, R.A.** (2009). A Nationwide Survey of Beef Producers about Feed Efficiency – Motivating Factors for the Implementation of Selection Practices. Beef Improvement Federation, National Meeting, April, Sacramento, CA,
- 2008 Ahola, J.K. and **Hill, R.A.** (2008). Selection for Feed Efficiency in Beef Cattle: Risks, Benefits, & Opportunities. Nancy M Cummings Research, Education and Extension Center, Salmon ID.
- Hill, R.A.** and Ahola, J.K. (2008). Residual Feed Intake: Benefits, Risks and Opportunities for Red Angus. Annual Convention of the Red Angus Association of America. September, Cheyenne, WY.
- 2007 **Hill, R.A.** and Ahola, J.K. (2007). Implementation of RFI in the US Beef Industry. Oregon Cattleman's Association Annual Meeting. November, Redmond, OR.
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