

REFERENCES

- Abe, N., Lean, I.J., Babiee, A., Porter, J. and Graham, C. 1994. Effects of sodium monensin on reproductive performance of dairy cattle. II. Effects on metabolites in plasma, resumption of ovarian cyclicity and oestrus in lactating cows. Aust. Vet. J. 71(9): 277-282.
- Baile, C.A., McLaughlin, C.L., Chalupa, W.V., Snyder, D.L., Pendlum, L.C. and Potter, E.L. 1982. Effects of monensin fed to replacement dairy heifers during the growing and gestation period upon growth, reproduction and subsequent lactation. J. Dairy. Sci. 65: 1941-1944.
- Bergens, W.G. and Bates, D.B. 1984. Ionophores: Their effect on production efficiency and mode of action. J. Anim. Sci. 58(6): 1465-1483.
- Brown, D.L. and Hogue, D.E. 1985. Effects of feeding monensin sodium to lactating goat: Milk composition and ruminal volatile fatty acid. J. Dairy. Sci. 68: 1141-1147.
- Chaiyabutr, N., Faulkner, A. and Peaker, M. 1980. The utilization of glucose for the lactating goat in vivo. Biochem. J. 186: 301-308.
- Chaiyabutr, N. 1994. The determination of fat concentration in milk by centrifugal method. Dairy cattle newsletter. 6(1): 3-4
- Chaiyabutr, N., Komonvanich, S., Sawangkoon, S., Preuksagorn, S. and Chanpongsang, S. 1997. The regulation of body fluids and mammary circulation during late pregnancy and early lactation of crossbred Holstein cattle feeding on different types of roughage. J. Anim. Physiol. a. Anim. Nutr. 77: 167-179.
- Clark, J.H. 1974. Lactational responses to post-ruminal administration of protein and amino acids. J. Dairy. Sci. 58(8): 1178-1977.

- Dewhurst, R.J. and Webster, A.J.F. 1992. Effects of diets level of intake, sodium bicarbonate and monensin on urinary allantoin excretion in sheep. British J. Nutri. 67: 345-353.
- Donoho, A.L. 1984. Biochemical studies on the fate of monensin in animals and in the environments. J. Anim. Sci. 58(6): 1528-1579.
- Duff, G.C., Galyean, M.L., Branine, M.E. and Hallford, D.M. 1994. Effects of lasalocid and monensin plus tylosin on serum metabolic hormones and clinical chemistry profiles of beef steers fed a 90% concentrate diet. J. Anim. Sci. 72: 1049-1058.
- Erwin, E.S. 1961. Volatile fatty acid analysis of blood and rumen fluid by gas chromatography. J. Dairy. Sci. 44: 1768-1771.
- Faulkner, A., Chaiyabutr, N., Peaker, M. Carrick, D.T. and Kuhn, N.J. 1981. Metabolic significance of milk glucose. J. Dairy. Res. 48: 51-56.
- Fawcett, H.A., balwin, S.A. and Flint, D.J. 1991. Hormonal regulation of the glucose transporter GLUT1 in the lactating rat mammary gland. Biochem. Soc. Tran. 20: 17s.
- Frobish, R.A. and Davis, C.L. 1976. Effects of abomasal infusions of glucose and propionate on milk yield and composition. J. Dairy. Sci. 60(2): 204-208.
- Giesecke, D., Ehrentreich, L. and Stangassinger, M. and Ahrens, F. 1994. Mammary and renal excretion of purine metabolites in relation to energy intake and milk yield in dairy cows. J. Dairy. Sci. 77: 2376-2381.
- Haney, M.E. and Hoehn, M.M. 1967. Monensin, a new biologically active compound : I. discovery and isolation. Agents Chemo Therap. 1: 349.
- Harmon, D.L. and Avery, T.B. 1987. Effect of dietary monensin and sodium propionate on net nutrient flux in steers fed a high-concentrate diet. J. Anim. Sci. 65: 1610-1616.

- Harmon, D.L., Kreikemeier, K.K. and Gross, K.L. 1993. Influence of addition of monensin to an alfalfa hay diet on net portal and hepatic nutrient flux in steers. J. Anim. Sci. 71: 218-225.
- Hayes, D.P., Pfeiffer, D.U. and Williamson, N.B.1996. Effect of intraruminal monensin capsules on reproductive performance and milk production of dairy cows fed pasture. J. Dairy. Sci. 79: 1000-1008.
- Hurley, W.L.1989. Mammary gland function during involution. J. Dairy. Sci. 72:1637-1646.
- KirchgeBner, M., Windisch, W. and Muller, H.L. 1995. Nutritional factors for the quantification of methane production, In: Ruminant Physiology, Engelhardt, W.V., Leongard-Mard, S., Breves, G. and Giesecke, D. edit, Ferdinand Enke Verlag, Germany: P333-341.
- Klopfenstein,T.1978. Chemical treatment of crop residues. J. Anim Sci. 46.841-846.
- Kronfeld, D.S. 1982. Major metabolic determinants of milk volume, Mammary efficiency and spontaneous ketosis in dairy cows. J. Dairy. Sci. 65: 2204-2212.
- Kuhn, N.S., Carrick. D.T. and Wilde, C.J. 1980. Lactose synthesis: The possibilities of regulation. J. Dairy. Sci. 63(2): 328-336.
- Laarveld, B., Christensen,D.A. and Brockman,R.P. 1981. The effect of insulin on net metabolism of glucose and amino acids in the bovine mammary gland.Endocrinology.108: 2217-2221.
- Laarveld. B., Chaplin.R. and Brockman,R.P.1985. Effects of insulin on the metabolism of acetate, β -hydroxybutarate and triglyceride by the bovine mammary gland. Comparative Biochemistry and Physiology. 83B: 265-267.

- Lean, I.J., Curtis, M., Dyson, R. and Lowe, B. 1994. Effects of sodium monensin on reproductive performance of dairy cattle. I. Effects on conception rates, calving-to-conception intervals, calving-to-heat and milk production in dairy cows. Aust. Vet. J. 68: 17-20.
- Linzell, J.L. and Peaker, M. 1971. Mechanism of milk secretion. Physiol Rev. 51: 564-597.
- Lowe, L.B., Ball, G.J., Carruthers, V.R., Dobos, R.C., Lynch, G.A., Moate, P.J., Poole, P.R. and Valentine, S.C. 1990. Monensin controlled-release intraruminal capsule for control of bloat in pastured dairy cows. Aust. Vet. J. 68: 17-20.
- Miller, P.S., Reis, B.L., Calvert, C.C., DePeters, E.J. and Balwin, R.L. 1991(a). Pattern of nutrient uptake by the mammary glands of lactating dairy cows. J. Dairy Sci. 74: 3791-3799.
- Miller, P.S., Reis, B.L., Calvert, C.C., DePeters, E.J. and Balwin, R.L. 1991(b). Relationships of early lactation and bovine somatotropin on nutrient uptake by the mammary glands of the lactating dairy cows. J. Dairy Sci. 74: 3800-3806.
- Nielson, M.O. and Riss, P.M. 1993. Somatotropin, Insulin-like growth factor-I and the mammary gland in regulation of nutrition and energy metabolism during early lactation. Acta. Vet. Scand. Suppl 89: 47-54.
- Nolan, J.V. 1993. Nitrogen kinetics. In: Quantitative aspects of digestion and metabolism. Forbes, J.M. and France, J. editor., Cambridge U. press, UK. p123-144.
- Philipson, A.T. 1970. Ruminant digestion. In: Dukes' physiology of domestic animals, 8th ed., M.J. Swenson editor., Cornell U. press, New York. p409-423.

- Politis, E.I., Lachance, E.B. and Turner, J.D. 1987. Plasmin and plasminogen in bovine milk: A relationship with involution. J. Dairy. Sci. 72: 900-9.
- Poos, M.I., Hanson, T.L. and Klopfenstein, T.J. 1979. Monensin effects on diet digestibility, ruminal protein bypass and microbial protein synthesis. J. Anim. Sci. 48(6): 1516-1524.
- Ramanzin, M., Bailoni, L., Schiavon, S. and Bittante, G. 1997. Effect of monensin on milk production and efficiency of dairy cows fed two diets differing in forage to concentrate ratios. J. Dairy. Sci. 80: 1136-1142.
- Rusell, J.B. 1987. A proposed mechanism of monensin action in inhibiting ruminal bacterial growth: Effects on ion flux and protonmotive force. J. Anim. Sci. 64: 1519-1525.
- Richardson, L.F., Raun, A.P., Potter, E.L., Cooley, C.O. and Rathmacher, R.P. 1976. Effect of monensin on rumen fermentation in vitro and in vivo. J. Anim. Sci. 43: 657-664.
- Sauer, F.D., Kramer, J.K.G. and Cantalin, W.J. 1989. Antiketogenic effect of monensin in early lactation. J. Dairy. Sci. 72: 436-442.
- Schelling, G.T. 1984. Monensin mode of action in the rumen. J. Anim. Sci. 58(6): 1518-1527.
- Schams, D. 1995. Recent implication of the hormonal control of lactation, In: Ruminant Physiology, Engelhardt, W.V., Leongard-Mard, S., Breves, G. and Giesecke, D. edit, Ferdinand Enke Verlag, Germany: P333-341.
- Teles, F.F., Young, K. and Stull, J.W. 1978. A method for rapid determination of lactose. J. Dairy. Sci. 61: 506-508.
- Thomson, G.E. and Thomson, E.M. 1977. Effects of cold exposure on mammary circulation, oxygen consumption and milk secretion in the goat. J. Physiol. 272: 187-196.

- Whitelaw, F.G., Hyldgaard-Jensen, J., Reid, R.S. and Kay, M.G. 1970. Volatile fatty acid production in the rumen of cattle given all-concentration diet. Br. J. Nutr. 24: 179-195.
- Wilde, C.J. and Knight, C.H. 1989. Metabolic adaptation in mammary gland during the declining phase of lactation. J. Dairy. Sci. 72: 1679-1691.
- Young, E.G. and C.F. Conway. 1942. On the estimation of allantoin by the Rimini-Schryver reaction. J. Biol. Chem. 142: 839-852.
- Zhao, F.Q., Glimm, D.R. and Kennelly, J.J. 1993. Distribution of mammalian facilitative glucose transporter mRNA in bovine tissues. Int. J. Biochem. 25: 1897-1905.
- Zhao, F.Q., Walter, T.D. and Kennelly, J.J. 1996. Localization and gene expression of glucose transporter in bovine mammary gland. Comp. Biochem. Physiol. 115b(1): 127-134.
- Zinn, R.A., Plascencia, A. and Barafas, R. 1994. Interaction of forage level and monensin in diets for feedlot cattle on growth performance and digestion function. J. Anim. Sci. 72: 2209-2215.

BIOGRAPHY

Mr. Sumpun Preuksagorn was born on September 9, 1972 in Ratchaburi, Thailand. He graduated from the Faculty of Veterinary Science, Chulalongkorn University with the degree of Doctor Veterinary Medicine in 1996. At present, he is a staff at the Department of Physiology, Faculty of Veterinary Science, Chulalongkorn University.

