เอกสารอ้างอิง

อัจฉริยา ไศละสูต 2006 (2549) เซลล์วิทยาวินิจฉัย ใน พยาธิวิทยาคลินิกทางสัตวแพทย์ ห้างหุ้นส่วนจำกัดปอยท์กราฟฟิค จำนวน 230 หน้า

Arber, P.A., Tamayo, R. and Weiss, L.M. 1998. Parafin section detection of the c-kit gene product (CD117) in human tissues: value in the diagnosis of mast cell disorders. Hum. Pathol. 29(5): 498-504.

Baker-Gabb, M., Hunt, G.B., France, M.P., 2003. Soft tissue sarcomas and mast cell tumours in dogs; clinical behaviour and response to surgery. Aus. Vet. Journal. 81: 732–8.

Bettini, G., Morini, M. and Marcato, P.S. 2003. Gastrointestinal Spindle Cell Tumor of the Dog: Histologiçal and Immunohistochem Study. Journal of Comparative Pathology. 129 (4): 283-293.

Cameron L, et al. 2004. Detection of c-kit mutations in canine mast cell tumors using fluorescent polyacrylamide gel electrophoresis. J Vet Diagn Invest. Vol. 16: 95-100.

Dobson J.M. and Scase T. J. 2007. Advances in the diagnosis and management of cutaneous mast cell tumours in dogs. Journal of Small Animal Practice. Vol. 48: 424–431.

Downing, S., Chien, M.B., Kaas, P.H., Moore, P.E., London, C.A. 2002. Prevalence and importance of internal tandem duplications in exons 11 and 12 of c-kit in mast cell tumors of dogs. Am. J. Vet. Res. 63: 1718-1723.

Fosmire, S.P., Dickerson, F.B., Scott, A.M., Bianco, S.R., Pettengil, M.J., Meylemans, H., Padilla, M., Frazer-Abel, A.A., Helfland, S.C. and Modiano, J.F. 2004. Canine malignant hemangiosarcoma as a model of primitive angiogenic endothelium. Lab. Invest. 84(5): 562-572.

Gil da Costa, R.M., Matos E., Rema. A., Lopes. C., Pires, M.A., Gartner F. 2007. CD117 immunoexpression in canine mast cell tumor: correlation with pathological variables and proliferation markers. B.M.C. Vet. Res. 3:19.

Govier, S.M., 2003. Principles of treatment for mast cell tumors. Clinical Techniques in Small Animal \Practice. 18: 103–6.

Kuipel, M., Webster, J.D., Kaneene, B., Miller, R., Yuzbasiyan-Gurkan,V. 2004. The Use of *KIT* and Tryptase Expression Patterns as Prognostic Tools for Canine Cutaneous Mast Cell Tumors. Vet. Pathol. 41:371-377.

Kubo, K., Katayama, K., Yonezama, K., Kotani, T., Ohashi, F., Matsuyama, S., Tsutsumi, C., Shimada, T., Sakuma, S. and Takamori, Y. 1998. Frequent expression of the c-kit proto-oncogene in canine malignant mammary tumor. Journal of Veterinary Science. 60 (12): 1335-1340.

London, C.A., Kissenberth, W.C., Galli, S.J., Geissler, E.N., Helfand, S.C. 1996. Expression of stem cell factor receptor (c-kit) by malignant mast cells from spontaneous canine mast cell tumours. J. Comp .Pathol. 113: 399-414.

London, C.A., Galli, S.J., Yuuki, T., Hu, Z.Q., Helfand, S.C., Geissler, E.N. 1999. Spontaneous canine mast cell tumors express tandem duplications in the proto-oncogene *c-kit*. Exp. Hematol. 27: 689–697.

London, C.A., Hannah, A.L., Zadovoskaya, R., Chien, M.B., Kollias-Baker, C., Rosenberg, M., Downing, S., Post, G., Boucher, J., Shenoy, N., Mendel, D.B., McMahon, G. and Cherrington, J.M. 2003. Phase I dose-escalating study of SU11654, a small molecule receptor tyrosine kinase inhibitor, in dogs with spontaneous malignancies. Clin. Cancer. Res. 9: 2755–2768.

London, C.A., Malpas, P.B., Wood-Follis, S.L., Boucher, J.F., Rusk, A.W., Rosenberg, M.P., Henry, C.J., Mitchener, K.L., Klein, M.K., Hintermeister, J.G., Bergman, P.J., Couto, G.C., Mauldin, G.N. and Michels, G.M. 2009. Multi-center, placebo-controlled, double-blind, randomized study of oral toceranib phosphate (SU11654), a receptor tyrosine kinase inhibitor, for the treatment of dogs with recurrent (either local or distant) mast cell tumor following surgical excision. Clin. Cancer. Res. 15 (11): 3856-3865.

London, C.A. 2009. Tyrosine kinase inhibitors in veterinary medicine. Top. Companion. Anim. Med. 24 (3): 106-112.

Loplamlert, N, Kanjanachinto, C, Kultrailak, S., Wagnaitham, S., Ketpun, D., and Sailasuta, A. 2010. A comparative study on c-kit expression and standard histopathology on grading of canine cutaneous mast cell tumor, Proceedings the 36th International Conference on Veterinary Science 2010, Impact Challanger Hall, Kuang thong thani, Nonthaburi, Thailand 2-5 November 2010, p. 140

Ma Y, et al. 1999. Clustering of activating mutations in c-kit's juxtamembrane coding region in canine mast cell neoplasms. The journal of investigative dermatology. Vol. 112(2): 165-170.

Morini, M., Bettini, G., Preziosi, R. and Mandrioli, L. 2004. c-kit Gene product (CD 117) immunoreactivity I Canine and Feline Paraffin Sections (Brief report). Journal of Histochemistry and Cytochemistry. 52(5): 705-708.

Owen, S.D. 1980. TNM classification of Tumor in Domestic Animals. World Health Organisation, Geneva.

Patnaik A.K, Ehler W.J, MacEwen E.G. 1984. Canine cutaneous mast cell tumor: morphologic grading and survival time in 83 dogs. Vet Pathol. Vol. 21(5): 469-74.

Prihirunkij K, Srisampan, S., and Bunnuang, U. 2007. Diagnosis of mast cell leukemia in a dog using MAPSS™ flow cytometry combined with toluidine blue. Journal of the Thai Veterinary Medical Association Under the Royal Patronage. Vol. 57(3): 64-72.

Pryer K.N, Lee, L.B., Zadovaskaya, R., Yu, X., Sukbuntherng, J., Cherrington, J.M., and London, C.A. 2003. Proof of Target for SU11654: Inhibition of KIT phosphorylation in canine mast cell tumors. Clini Cancer Res. Vol. 9: 5729–5734.

Reguera, M.J., Ferrer, L., and Rabanal, R.M., 2002. Evaluation of intron deletion in the *c-KIT* gene of canine mast cell tumors. Am. J. Vet. Res. 63:1257-1261.

Riva, F., Brizzola, S., Stefanello, D., Crema, S and Turin, L. 2005. A study of mutation in the c-kit gene of 32 dogs with mastocytoma. J. Vet. Diagn. Invest. 17(4): 385-388.

Rothwell, T.L., Howlett, C.R., Middleton, D.J., Griffiths, D.A., Duff, B.C. 1987. Skin neoplasms of dogs in Sydney. Aus. Vet. Journal. 64: 161–4.

Simose, J.P. Schoning, P. and Butine, M. 1994. Prognosis of canine mast cell tumors: A comparison of three methods. Vet. Pathol. 31: 637-647.

Thamm D. H. and Vail D.M. 2007.Mast cell tumors. In: Withrow and MacEwen's Small animal clinical oncology. Stephen Withrow and David M. Vail (ed.) St Louis, Missouri, US: Elsevier. 402-424.

Turin, L., Acocella, F., Stefanello, D., Oseliero, A., Fondrini, D., Brizzola, S. and Riva, F. 2006. Expression of *c-kit* proto-oncogene in canine mastocytoma: a kinetic study using real-time polymerase chain reaction. J. Vet. Diagn. Invest. 18: 343–349.

Webster, J.D., Kiupel, M., Kaneene, J.B., Miller, R. and Yuzbasiyan-Gurkan, V. 2004. The use of KIT and tryptase expression patterns as prognostic tools for canine cutaneous mast cell tumors. Vet. Pathol. 41: 371–377.

Webster, J.D., Yuzbasiyan-Gurkan, V., Kaneene, J.B., Miller, R., Resau, J.H. and Kiupel, M. 2006. The role of *c-kit* in tumorigenesis: Evaluation in canine cutaneous mast cell tumors. Neoplasia. 8 (2): 104-111.

Webster, J.D., Yuzbasiyan-Gurkan, V., Miller, R.A., Kaneene, J.B. and Kiupel, M. 2007. Cellular proliferation in canine cutaneous mast cell tumors: Associations with *c-kit* and its role in prognostication. Vet. Pathol. 44: 298-308.

Yancey, M.F, Merritt, D.A., Lesman, S.P., Boucher, J.f., and Micheals, G.M. 2009. Pharmacokinetic properties of toceranib phosphate (Palladia™, SU11654), a novel tyrosine kinase inhibitor, in laboratory dogs and dogs with mast cell tumors. J. Vet. Pharmacol. Therap. Vol. 33: 162–171.

Zemke, D., Yamini, B., and Yuzbasiyan-Gurkan, V. 2001. Characterization of an undifferentiated malignancy as a mast cell tumor using mutation analysis in the proto-oncogene c-KIT. J Vet Diagn Invest 13: 341–345.

Zemke, D., Yamini, B., and Yuzbasiyan-Gurkan, V. 2002. Mutations in the Juxtamembrane Domain of *c-kit* are associated with higher grade mast cell tumors in dogs. Vet Pathol. Vol. 39: 529–535.

ภาคผนวก

ตารางแสดงประวัติสุนัขป่วยด้วยเนื้องอกมาสต์เซลล์ที่ใช้ในการศึกษา (n=30)

สุนัข	อายุ (ปี)	เพศ	พันธุ์	ตำแหน่ง	จำแนกเกรดทางจุลพยาธิวิทยา	ระดับอาการทางคลินิกของเนื้องอก	*RBC($x10^6$)*	*Hct(%)*	*Platelet($x10^6$)*	*WBC*	*Neu.*	*Band*	*Eosinophil*	*Lymphocyte*	*Monocyte*	*SGPT*	*ALP*	*BUN*	*CREATININE*	*Blood parasite*
1	10	ผู้	Pug	Skin	I	I	3.1	20	232	21900				6	9	24	77	11	0.7	Microfilaria
2	14	ผู้	Thai	Abdomen	I	I	3.7	42	79	11400	80	2	3	13	2	28	51	12	0.9	ไม่พบ
3	ไม่ทราบ	เมีย	GR	Back	I	III	4.2	45	160	13800	84	2	4	7	3	25	40	38	1	ไม่พบ
4	12	ผู้	mixed	Lt.scrotum	I	I	6.7	49	278	20300	83	3	3	7	4	34	32	20	1.1	ไม่พบ
5	6	ผู้	unk	Ventral abdomen	I	I	7	50	87	7800	80	1		15	4	15	70	18	1.3	ไม่พบ
6	ไม่ทราบ	ผู้	mixed	Mass at right leg.	I	II	5	40	367	2900	96		1	2	1	23	391	12	1.1	ไม่พบ
7	18	เมีย	mixed	Mammary gl.	I	II	4.3	49	274	16300	80		1	15	4	48	175	24	1.2	ไม่พบ
8	9	ผู้	mixed	Skin	I	I	7	34	145	12500	83	2	3	8	4	55	455	20	1.6	ไม่พบ
9	ไม่	ผู้	Thai	Scrotal sac	I	I	4.8	41	339	8200	77		1	21	1	75	175	18	1.3	ไม่พบ

	ทราบ																			
10	>5	เมีย	mixed	Lt. arm	I	I	5.6	40	298	19800	82	2	2	5	9	29	263	19	1.4	ไม่พบ
11	10	เมีย	GR	Skin	II	I	6.3	39	165	24200	64	1	5	22	8	72	393	12	1.1	ไม่พบ
12	10	เมีย	mixed	Abdomen, lt. hind limb	II	II	5.6	50	191	8500	76			19	5	49	250	22	0.7	ไม่พบ
13	ไม่ทราบ	เมีย	unk	Lt. flank	II	III	6.8	39	187	10100	80	2	9	5	4	20	94	6	1.1	ไม่พบ
14	10	ผู้	mixed	Skin	II	I	5.5	38	130	14800	80			16	4	30	106	11	1.3	ไม่พบ
15	11	ผู้	Basset hound	Skin	II	I	6.3	39	360	16100	70	1	1	25	3	28	274	15	0.8	ไม่พบ
16	16	ผู้	Shih tzu	Prescapular	II	I	6	34	412	18400	81	11	4	2	2	26	154	7	0.6	ไม่พบ
17	12	ผู้	Chihuahua	3rd digit	II	II	4.4	59	340	27100	71	9		14	6	211	1101	49	1.4	ไม่พบ
18	10	ผู้	mixed	Skin at dorsal part of rt. Flank	II	I	8	46	362	16400	85	3	5	4	3	59	78	8	0.9	ไม่พบ
19	ไม่ทราบ	เมีย	Bang Kaew	Rt. Hock jt.	II	I	6.9	41	217	8200	82		4	9	5	124	688	8	0.9	ไม่พบ

20	12	เมีย	Shih tzu	Skin	II	I	6.4	26	88	18500	84	4	3	7	2	31	64	18	0.7	ไม่พบ
21	12	ผู้	mixed	Mass at Rt. upper lip.	III	I	6	43	162	25700				11	9	56	106	15	1.4	ไม่พบ
22	ไม่ทราบ	เมีย	Thai	Median side of Rt.hindlimb	III	I	4.1	34	61	31100	88	4	1	3	4	250	1430	10	0.8	ไม่พบ
23	ไม่ทราบ	เมีย	ไม่ทราบ	Rt.abdominal	III	I	7.2	27	245	12200	76	3	5	13	3	*	*	*	*	ไม่พบ
24	10	เมีย	mixed	Lt.axillary	III	III	6.5	37	278	7800	81		7	10	2	41	60	14	1	ไม่พบ
25	4	ผู้	ไม่ทราบ	Skin	III	I	5.3	45	404	11500	75	2	13	7	3	19	85	19	1.2	ไม่พบ
26	ไม่ทราบ	ผู้	Thai	Rt.cervical	III	I	6.7	41	366	10000						35	87	8	1	*
27	7	ผู้	Cocker	Rt.elbow	III	I	6.3	35	446	78900	60	23	3	5	9	68	393	18	1	ไม่พบ
28	10	ผู้	Mixed	Popliteal ln.	III	II	4.5	27	435	58300	50	20	3	22	5	51	560	22	1	ไม่พบ
29	8	ผู้	Shih tzu	Rt.hock jt.	III	I	6.9	50	216	10500	77		5	16	2	57	263	39	2	ไม่พบ
30	10	ผู้	Shih tzu	Lt.hock jt.	III	I	5	34	176	19300	75		2	20	3	48	283	10	1.3	ไม่พบ

I = มะเร็งมาสต์เซลล์เกรด I II = มะเร็งมาสต์เซลล์เกรด II III= มะเร็งมาสต์เซลล์เกรด III

I = ระดับอาการทางคลินิกของเนื้องอกระดับที่ 1 II= ระดับอาการทางคลินิกของเนื้องอกระดับ 2 III= ระดับอาการทางคลินิกของเนื้องอกระดับ 3

ภาคผนวก ข

ผลงานวิจัยที่ได้นำเผยแพร่ในการประชุมวิชาการ จำนวน 4 เรื่อง

1. Theerawatanasirikul, S., Teewasutrakul, P, Rangsipipat, A., Wangnaithum, S., and **Sailasuta, A.** 2009. The prognostic value of kit expression on canine mast cell tumors by immunocytochemistry. In the Proceedings of the 2nd Federation of Asian Small Animal Veterianary Association Congress 2009 and Veterinary Medicine & Livestock Development Animal Conference 2009, Bangkok, Thailand, 3-5 Nov. 2009.
2. Sirin Theerawatanasirikul, **Achariya Sailasuta**, Supradit Wangnaitham, Anudep Rangsipipat tharakrit Teewasutrakul. 2010 C-KIT Immunocytochemistry on canine cutaneous mast cell tumor: A case report In the Proceedings of VPAT Regional Veterinary Congress 2010, Bangkok, Thailand, 25-28 April, 2010. P. 44
3. Ketpun, D., Lacharoje, S., Theewasutrakul, A., Rungsipipat, A., Piyawiriyakul, P., **Sailasuta, A.** 2010. Development of *c-kit* Expression from Canune Cutaneous Mast Cell tumors FNA –Cells by PCR. In the Proceedings the 36th International Conference on Veterinary Science 2010, Impact Challanger Hall, Muang thong thani, Nonthaburi, Thailand 2-5 November 2010, p. 139
4. Loplamlert, N, Kanjanachinto, C, Kultrailak, S., Wagnaitham, S., Ketpun, D., and **Sailasuta, A.** 2010. A comparative study on c-kit expression and standard histopathology on grading of canine cutaneous mast cell tumor. In the Proceedings the 36th International Conference on Veterinary Science 2010, Impact Challanger Hall, Kuang thong thani, Nonthaburi, Thailand 2-5 November 2010, p. 140